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ART. I. OBSERVATIONS *on* ENDEMIC FEVER: *delivered as the Annual Address before the Medical Society of the State of New-York, at the Capitol, in the city of Albany, on the 3d of February*, 1824. By ALEXANDER COVENTRY, M. D. President of the Society.

GENTLEMEN OF THE SOCIETY,

HOWEVER incompetent I may feel myself to perform the duties attached to the office I now fill, I should esteem it as savouring of ingratitude, were I not to make an effort. Rather unexpectedly to me, being placed here, I must, in the first place, be permitted to express the grateful and sincere sentiments with which I duly appreciate this proof of your consideration. Having been located for many years of my life, at a distance from those sources of information which are to be found only in cities, nothing but a full confidence, that your kind indulgence will make due allowances for the disadvantages I labour under, has enabled me on the present occasion, to make a feeble attempt to perform part of the duties attached to the Presidential Office. The subject to which I would solicit your attention, is Endemic Fever; and

instead of endeavouring to recapitulate the opinions of others, either ancient or modern, I shall chiefly confine my remarks to my personal observations, and submit to you the inference drawn from many years' experience.

I use the term Endemic, rather in contradistinction to Epidemic, than as fully indicating the meaning wished to be conveyed; for I would be understood as speaking of fever originating from a local cause, rather than of a disease indigenous to a district or people; for as I hope hereafter to show, this fever has been prevalent in some countries at one period, and entirely banished at others. I find it impossible to assign it a place in any nosology with which I am acquainted, for I have seen it assume all the forms described under the term Pyrexia; nay, in the same individual it often commences with most violent arterial action, yet ends in the most marked state of nervous debility. Hippocrates, many centuries ago, as I believe, described this disease under the appellation of Causus. Endemic Fever infested Rome for the first three centuries after its foundation. It was banished for a long period, while the mistress of the world paid strict attention to her internal police, but reappeared in her decline, when the proud city became a prey to barbarians and despots, and the *salus populi* was no longer the *suprema lex*. At present, during the summer and autumn nearly one half of Rome is uninhabitable, and there is reason to fear, that ere long she may become what Babylon now is, the abode of wild beasts. Endemic Fever is found to prevail along the coast of the Mediterranean, from its inlet to its outlet, from Constantinople to Gibraltar: it is the Jungle Fever of Hindostan; the Mal de Siam, further East; the destructive fever of Batavia; what has caused both coasts of Africa to be so destructive to the white man; and makes the West Indies the grave of the flower of the European youth. It has already laid our country in tears for the loss of young men who bade fair to rival in fame those naval heroes, who have raised a halo of glory around their country, not more by their splendid victories, than by their humanity to the conquered.

To Endemic Fever are we indebted for the annual visits of our southern brethren, who fly from the bad air of their swamps, to inhale the pure breeze of our mountains, to admire our stupendous works of art and nature, to bathe on our airy strands, or drink at our hygiean fountains. It was this fell destroyer, that proved more destructive to your ancestors, and was more dreaded than the yell of the savage, or the rigours of the climate; nor am I sure that it was not Endemic disease that for ages kept down the population of the New World, and preserved this portion of it as an asylum for the oppressed and afflicted of another, if not a better race of men.

I know, for I have frequently witnessed the fact, that Endemic Fever is more disheartening to the pioneer, than the heaviest forest, or all the deprivations and hardships incident to a new settlement. Even last summer, a gentleman, passing through Indiana and Ohio, met with pale faces at almost every door, or heard the moan of sickness from nearly every cabin. If I am not much mistaken, it is the same disease that at times makes our cities desolate, and allows the grass to grow in our most frequented streets; nay, after years of reflection on the subject, my conviction is, that the plagues which formerly appeared at various periods in London, in Holland, at Marseilles, and Moscow, had their origin from local causes: they were all disorders of the season, and disappeared on the approach of the winter. Why at Constantinople does the plague prevail chiefly in the autumnal months? Why is it checked by the first severe frost, and almost annihilated during the winter, notwithstanding the filthiness of the inhabitants? Constantinople is at the mouth of the *Black Sea*, and is surrounded or bounded on three sides by extensive marshes. Why is the plague annually swept from Egypt, when her surface is scoured by the overflowing of the Nile? If the axiom be true, that the same causes, under similar circumstances, must produce the same effects, then all these diseases are derived from the same stock, and are brethren of the same family. Had I remained in the country of my birth and education, nay, had my location continued on the well

cultivated banks of the North River, I should have probably to this day, adhered to the doctrines I imbibed from the venerable Cullen, and pursued the plan of practice taught by the admirable Gregory; but it was my destiny to pass another ordeal, to verify the observation, "that one half of life is spent in unlearning what was taught us in the other half." I soon found that nosological arrangements, however applicable in the mild climate of Europe, in the healthy countries of England and France, availed but little among the swamps and marshes of the New World; for there I often found fever, assuming such protean features, such varying appearances, that before the ink was dry, with which you had placed it in class and order, a new symptom would arise, calling on you to alter its nomenclature. More than once I have witnessed disease approach under the disguise of an intermittent, yet, before sunset of the third day, hurry the patient to his silent abode. Often have I seen it commence with decided marks of malignancy, yet terminate in a mild tertian. If in availing myself of the opportunity which your kindness has this day afforded me, of laying before this respectable Society my opinion on certain forms of fever, I should differ from some of my professional brethren, I must be permitted to state, that unaccustomed *jurare in verba magistri*, I have no school tenets, no favourite hypotheses to support, claim no discovery, nor reckon on the novelty of my opinions, nothing doubting but the same conclusions have been drawn from similar premises, and probably long before the present time. I will, however, submit to you my reasons, derived from facts, collected during the last thirty years; in some periods of which I had ample opportunities of observing Endemic Fever under all its various phases. Supposing the observation to be correct, that nine-tenths of those who die from disease, fall victims to fever, and if, of all fevers, that alluded to is the most wide in its range, the most fatal in its result, there can be no subject of more importance to mankind, or more worthy of our attention, than an investigation into the cause, origin, and prevention of this form of malady. I will briefly state,

when and where I first became acquainted with this species of fever, previous to which I had but an incorrect idea of its nature.

In the month of June 1792, I arrived with my family at my land, near the outlet of the Seneca Lake, in what was then called the Military Tract, and sometimes the Genesee country. The accurate description of that district by Dr. Ludlow, published in No. 5 of the New-York Medical and Physical Journal, will supersede the necessity of dwelling on its topographical features. To those who have not seen the description alluded to, I would mention, that a glance at the map of the state will discover in the Western District, a number of small lakes, whose longest range is north and south, and their combined outlets form the Seneca and Oswego rivers, the latter of which enters Lake Ontario. The tract called the Genesee, or Lake country, may be said to extend from the foot of the Allegany spurs or dividing ridge, to the shores of Lake Ontario, and may be said to be a gently inclined plane, facing the north, with some slight elevation on its surface. The levelness of the country may be estimated, from its moderate elevation above the water, the sluggish movement of the streams that discharge into the Lakes, by the few rapids on the Seneca river, the immense marshes on that stream, said to contain many thousand acres, and by the route of the Erie Canal, which might have carried on the same level from Utica to Lockport, above 200 miles. This tract lies between latitude 42 and 43.50, about 80 miles in width from north to south, and 200 miles from east to west. The centre of this tract is about 350 miles from the sea, and about 400 feet elevation above tide water, where the canal passes. It abounds with marshes at the head, while along the outlet of most of the lakes, there are swampy lands; wherever a bay extends inland from the large lake, you find low lands. When I first became acquainted with the Genesee country, it was a forest, the surface covered with lofty deciduous trees; the snow fell generally in November and December, and disappeared about the first of April. The thermometer would sometimes fall from 10 to 16 degrees

below zero, and in summer rise as high as 95 in the shade. The summers were rather dry, and the rains came with thunder, and fell in heavy showers. On the 1st July 1792, I left my family in good health. On my return about the 17th of the month, of fourteen inmates, I found thirteen in bed with fever, and in the course of a few days, the other was likewise attacked. On the 15th of September, I was attacked with a chill, succeeded with a severe pain in the back, and violent headach, to the latter of which I never had been subject. This was accompanied with a species of delirium, attended with phantasms continually passing before my eyes. A violent fever succeeded, with hot skin, parched tongue, and constant nausea. On the third day, taking a powerful emetic of six grains of tartarized antimony, I vomited nearly two quarts of bile; my skin became moist, and the headach abated. On the fifth day, every symptom was much ameliorated, and the danger seemed past; yet it was five weeks before I could sustain my own weight to walk to the door. In each of the two succeeding seasons, I had an attack of fever, but milder at the commencement, and more easily managed; I attributed these attacks to the fatigues and exposures inseparable from the practice of medicine, in a new and thinly inhabited country where my visits sometimes extended from 20 to 40 miles; but a circumstance, for which I have not been able to account, was, that for many years after, even when I had quitted that section of the country, about the same season, I was seized with a fever of a single paroxysm, which invariably went off with a copious perspiration, of an uncommon and nauseous odour. In the year 1793, when about to commence my harvest, every man on the farm was seized with fever. I remember to have passed through Geneva, when there was not a sick person in the place; on my return within a few days, with the exception of a Miss Tallmadge, every individual in the village was confined to bed with fever. During the autumnal months, from the year 1792 to 1795 inclusive, the proportion of the sick to the well was, according to the population, much greater in the Genesee country, than in either of the large cities, even

in those seasons when malignant fever was most prevalent. If in the country the fatal cases were fewer in number, this might arise from different modes of living, less use of animal food, or spiritous liquors, more regularity and cleanliness, a freer air, or even less virulence in the remote cause, which arises in the country principally from the decay of vegetable matter. The general type of fever inclined to be remittent when the attack was violent, and the issue fatal; its course was often finished on the evening of the third day, and sometimes without the appearance of reaction. The mortal cases seldom extended beyond the fifth or seventh day, while others less violent, would run on to the fourteenth, and sometimes longer. Those who survived were subject to relapses, especially on any excess in eating, which it was difficult to guard against, as the fever was generally followed by a ravenous appetite, which, however, seemed not to restore the system to its former tone, as many did not recover their strength till the approach of warm weather in the ensuing season. Almost every fatal case was attended with yellow, or rather orange-coloured skin; many had ejections from the stomach of brown or coffee-coloured matter; the ejections were often dark-coloured, sometimes of a pitchy appearance, and petechial spots on the skin were not uncommon. In the robust and middle-aged, if full feeders and hard drinkers, the disease had a rapid career and fatal result; few of the emigrants from Europe or the New-England states escaped; those from Pennsylvania and New-Jersey were less liable, while the settlers from Maryland, Virginia, Delaware, and further south, seemed to enjoy an immunity. Those who had the fever were much less liable to a second attack, except when a predisposition was induced by sudden exposure to cold after being heated, or from excessive fatigue. During the years mentioned, I can truly say, that few days occurred, from the middle or latter part of July to the setting in of the frost, about the middle or end of October, that did not afford me an opportunity of visiting a patient with Endemic Fever; indeed, during no small portion of that period, there was no necessity of leaving my domicile in quest

of a case. Extensively engaged in agriculture, I generally had a number of men employed, few of whom escaped the tribute of a seasoning. I may almost say, that it was in my own house—in rearing a numerous family—in my own person, that I acquired what I esteem an approach near to a correct view of febrile action. For in hospitals, how often do we see a fever patient brought in, to draw his last breath, and to receive a charitable burial; in private practice, the lady of the house has generally exhausted her skill before the physician is called in, and he only sees the disorder in its secondary stage. How often have I with joy hailed the first symptom of arterial excitement, which never failed to resuscitate hope in the parental bosom!

Omitting for the present any remarks as to other fevers, we will now institute some inquiries, on what have generally been considered as the remote causes of the disease alluded to as Endemic Fever. Being prevalent within the tropics, it has been attributed to the effect of heat on the human body, but facts do not support this hypothesis. Glass-blowers, and those employed in other pursuits which subject them to great heat, are not more liable to fever than other men. Sir Charles Blagden ascertained that the body would support with impunity, a degree of heat much above that of boiling water. The Arab amid his burning sands, and the inhabitants on the scorching plains of Cumana, are strangers to Endemic Fever. In some of the Windward Islands, where there are neither woods or marshes, even the British soldier under a tropical sun, lives longer and enjoys better health, than in his native climate. The Circe frigate remained two years and six months in the West Indies without having a sick man on board. In our own fields do we not annually see, during hay time and harvest, men using violent exercise in a heat exceeding that of some tropical places, even when the rays of a meridian sun will raise the mercury in the thermometer to 120, yet no febrile action ensues? How often do we see some inhabitants of the same village, nay of the same house, become victims to fever, while others, exposed to the same temperature,

escape. Others from frequently witnessing the fever in low and wet countries, have thought that it arose from excessive moisture, but this opinion is still less tenable than the former, for the Newfoundland fisherman, immersed for months in thick fogs, with his clothing continually soaked with water, is perhaps the most healthy and hardy of his species. Even in the climate of Grand Cairo, the water carriers, whose clothes and skins are constantly moist, are the most exempt from disease. In our own country, the Mohawk, Susquehannah, and St. Lawrence boatmen, who during the summer, are nearly half their time in the water, are not subject to fever. The generality of medical men have agreed in attributing the remote cause of the fever alluded to, to marsh miasmata; but what this supposed agent is, no one has yet ascertained. It has hitherto escaped the cognizance of the senses, and eluded the tests of the chemist. Like the Typhon of the ancients, I suspect it is the offspring of the imagination. I am fully convinced from observation, that it is only under certain circumstances that marshes become more unhealthy than mountains. We have seen well marked Endemic Fever originate on shipboard a thousand miles distant from any marsh. Nor has time yet erased from my memory the days I spent among the mossy moors and peat-bogs of my native country, where neither pale face nor yellow eye was seen among the inhabitants. How many thousand acres of marsh have I seen not only on the Atlantic coast, but along the course of the Detroit, Niagara, and St. Lawrence, where the Endemic Fever was not to be found! In the first instance, a flood tide swept the face of the marsh every twelve hours, in the latter, a steady and regular moisture was kept up by those noble rivers, of which it might with justice be said,

> "Though deep, yet clear, gentle, yet not dull,
> "Strong without rage, without o'erflowing, full."

A residence for some years on the edge of a marsh, from which I annually procured a considerable quantity of hay,

afforded me an opportunity of observing the changes to which the insalubrity of marshes may be attributed. In some seasons the labourers would, with impunity, remain at work in the marsh for weeks, with the water as high as their ankles every day; at other times they would sicken in forty-eight hours, and I would be under the necessity of postponing my hay-making, till a severe rain or frost altered the condition of the marsh. If abundance of rain caused the water to overflow its usual bounds, and the flood continued long enough to drown the land plants on its borders, on the recession of the waters the process of vegetable putrefaction commenced on its margin. If the season proved unusually dry, the moisture was insufficient to support the aquatic plants; they perished and underwent the same process: thus the draining of marshes is unhealthy during the first season, from the decay of the aquatics that grow in them. In observing the phenomena of two ponds at the north end of the Seneca Lake, I learned how different seasons might affect the healthiness of a country. While these had a free communication at high water with the lake, no bad consequences resulted; but if the drought of the summer caused the surface of the lake to become low, one of these would drain off, the water plants perish, probably with the insects on them, and a most horrible stench was emitted. This commonly would last about a fortnight, when the whole surface would be covered with a crop of land plants, and the smell would cease: a heavy rain by filling the pond, would at times prevent this, at other times a shower would prolong the process. The other pond, whose bottom was deeper, and which was never entirely drained, would be considerably later in affecting the air. Thus, we may easily conceive why one season is more unhealthy than another; why a violent storm and heavy rain may at one time put an end to a raging pestilence, as it did at Naples in the time of Prosper Alpinus, and as it did, I believe, at Natchez last season. It washes the surface, and operates like the inundations that Sir John Pringle said were practised in Belgium, and something similar to the overflowing of the Nile. Yet the same may be the precursor

and cause of disease, as it is on the coast of Africa, which becomes sickly when the rains set in.

During my residence in the lake country, I frequently remarked the effects of rains: if much water fell, the ponds near the lakes were kept full, and the lowlands in their vicinity continued healthy; but superabundant moisture assisted the decay of the leaves which covered the surface of the uplands, and fevers prevailed at a distance from the waters. The decay of the leaves of deciduous trees, as I think, is the true cause of the unwholesomeness of new and wooded countries. I believe the idea was first held out by Franklin, and acceded to by Dr. Rush, that wooded countries were healthy; but with the exception of the pine barrens of the south, compared with their swamps, the opinion is unsupported by either fact or reason. The woody regions of both Africa and the West Indies are the most sickly, and the name of Jungle Fever, shows where it prevails in the east. Have we not witnessed in our own times, in this country, surprising ameliorations made by removing the forest? The Genesee country is in proof, and perhaps still more so the country in which I now reside. Few of the first settlers escaped a seasoning: when I first became acquainted with that district, Endemic Disease was rife; now agues and dysenteries have almost disappeared from the valley, yet few drains are cut, and the removal of the forest is almost the only change.

I said unsupported by reason; for let us suppose an extensive area covered with a dense forest of trees that annually deposit their foliage, the gases evolved in the process of the decomposition of the leaves, are not of the most salubrious nature, as the pale and languid looks of the woodman testify. Let us suppose the same area covered with a verdant crop of grass or grain; it then becomes the laboratory of nature for purifying the air: every shower, the dews of each night deposited on the herbage, and acted on by the solar ray, evolve oxygen, the principle of vitality.

If neither heat or moisture, nor that child of the imagination, marsh miasmata, can fairly be arraigned as the remote cause of fever, where shall we look for it? Having for nearly

forty years observed the species of fever spoken of, always accompanied by, and never independent of vegetable or animal decomposition, the conclusion was unavoidable, that it was dependent on, or connected with that process. But whether our bodies are affected by a poisonous gas given out, or by a chemical change, a new play of affinities in the atmospheric air rendering it less fit to support the vital principle, is to me a desideratum which none of the eudiometrical observations that I have yet seen have tended to solve. The deleterious effects of vegetable and animal decomposition on the human body are established by innumerable facts with which the records of medicine abound. Professor Jackson of Philadelphia, in his accurate statement of the fever that prevailed in that city in 1820, makes it appear more than probable, that the disease as it showed itself at Hodge's and Walnut-street wharves, arose from decaying vegetables. Five of the family of a Mr. Hawley, of Luzerne County, Pennsylvania, fell victims to a fever caused by potatoes decaying in the cellar. In 1806, I was called to visit a sick woman, who lived on an elevated situation, at a distance from any marsh or swamp—no disease prevailed in the neighbourhood, and there was no cellar to the house. I found the mother and two children confined with remittent fever, an uncommon complaint in that vicinity. After some inquiry, I found within a few rods of the door, a deep hole which had been dug for a well, but never stoned up: this had filled with rain water, and a number of half decayed logs had been rolled into it: a stench arose from it, resembling the bilge water of a foul ship. The place was filled up with gravel, and the sick recovered. On the 4th March 1808, I visited a sick child of Mr. M. The house stood on a sandy ridge at a distance from any ponds or marshes, the country was remarkably healthy, and the situation so much so that I have not heard of a sick case in the house since that time. The child, three years of age, had considerable fever; the mother attributed this to worms, and suspecting no other cause, the usual anthelmintics were given. On a subsequent visit I found a lad of nine years old on the

bed, with flushed face, blood-shot eyes, violent headach, furred tongue, full pulse; in fine, all the well marked symptoms of bilious remittent fever. Miss M. a young lady of 18, complained of nausea, pain in the back, bitter taste in the mouth, a dull headach, the adnata yellow, slight fur on the tongue, bowels constipated. Mrs. M. had also lost her appetite, and complained of some pain in the back. Surprised at these appearances, I was at a loss to account for them. On my first visit, I perceived an unusual and very disagreeable smell, and looked around to discover the source; but every thing within and without bespoke the neatness and cleanliness of a respectable English family. However, on my third visit, as the fœtor continued, I ventured to inquire of Mrs. M. whence it arose. Both mother and daughter assured me that they were not sensible of any uncommon smell. I then inquired into the condition of the cellar; this had been well cleaned out sometime before; but on a little reflection, Mrs. M. recollected that about eight bushels of turnips in a frozen state, had lately been deposited there. On inspection the turnips were found in a complete state of putrefaction, emitting a horrible fœtor: a brisk west wind which found admittance through the cellar window, was forcing this steam through a trap door into the hall, and through every crack in the floor: the family had got habituated to the bad scent, which, increasing by degrees, was imperceptible to them, although intolerable to me. The cause was removed, lime strewed on the walls and bottom of the cellar, and the sick soon recovered. Here was a striking instance, that a low temperature will not guarantee us from disease; for on the morning of the 7th, the thermometer stood at only three degrees above cipher, nor rose above 25 during any time of the sickness. It shows also, that cold does not operate so much in lessening our susceptibility, as in destroying the cause. In this case, the position of the turnips in the cellar, protected them from the frost which would otherwise have arrested the process, as it is said that a degree of heat equal to 45 Fahrenheit, is necessary for vegetable decomposition.

In March 1822, a young man in my employ, while removing some sheep dung and litter, which were in a stage of putrefactive fermentation, and to the effluvia of which he was exposed for the most part of two days, on the afternoon of the second day, suddenly fell down, complained of violent headach, vomited several times, had nausea, and a most obstinate costiveness supervened, which it required repeated doses of calomel and jalap to remove. After a continued catharsis he recovered.

On the 18th September 1817, a fine lad about 18, the son of my neighbour, while passing along a ditch that forms the west line of my farm, observing some small fish, endeavoured to catch them, and wrought about an hour in the stagnant water. Towards evening of the next day he had chills, nausea, headach, a severe pain in the right shoulder and arm; the latter swelled, became insensible and immoveable, (he had used this in the ditch); he became comatose, and died on the eighth day.

I will not detain you by adducing more facts, as both your practice and reading will furnish them in abundance. Considering the ephemeral duration of the most splendid hypothesis, I will not at present dwell on the opinion I entertain of the modus operandi of this cause on the human body; my ideas on that subject may be found in the 7th No. of the New-York Medical and Physical Journal, as I ventured to deliver them before the Oneida County Society on the 1st July last. It may be there seen, that I suppose the deleterious cause, operating as a sedative poison, exerts its influence first on the cuticular nerves, by sympathy on those of the chylopoetic viscera, and finally on the whole system. Professor Jackson, in his account of the fever that prevailed in Philadelphia in 1820, has this remark: "Most of the malignant cases were attended with entire torpor of the capillaries of the skin." He also says, "the insensibility and inability was at times so great, that it could only have proceeded from the death of the surface." I have long been of opinion that the changed colour of the skin, the muddy or blood-shot appearance of the adnata, arose from a torpid state of the vessels, admitting too gross particles into their tubes.

And I am strongly led to suspect, that the engorgement or infarction observable, in the stomach duodenum, liver, and spleen, are not the result of active inflammation, but owing to an atony of the nerves in those organs. The discharges of blood, the pitch like stools, the black vomit, I believe are owing to the leaking of relaxed vessels, similar to the petechiæ observable on the skin, the construction of which latter, generally, though not always, prevents a flow of blood; even the effusions on the brain are often merely passive; for what resemblance has the stupor or coma that accompanies these, to Phrenitis, or the gastric symptoms of Endemic Fever, to Gastritis? I cannot but suspect that the celebrated Broussais has mistaken the effect for the cause, in thinking fever produced by local derangement.

Omitting for the present any inquiry into the symptoms or treatment of Endemic Fever, both of which are fully discussed by various authors, I will beg leave to make a few observations on the best plan of prevention. It is mercifully ordained by our benevolent Creator, that the poisonous effluvium is neutralized, and loses its power when sufficiently diluted with atmospheric air, and its influence is confined to narrow limits. Thus while between twenty and thirty thousand of the British troops lay sick at Walcheren, the soldiers and sailors aboard the fleet within a few rods of the shore, escaped; even those stationed in Fort Batz, were exempted, while their comrades without the gates were attacked. In 1816, when the troops and others stationed in Monks-hill barracks in Antigua, whose duty did not require them to sleep out of the barracks, enjoyed good health; the sentinels who mounted guard at the docks and other low places, were often seized while at their posts, with the most aggravated form of disease. The width of a street often gives security in Rome against the Malaria. In our own cities we often see one street deserted, and the next inhabited. How often have I seen a family whose house stood near a swamp or marsh, afflicted annually with fever, when their next neighbour within gun-shot, would for years have no occasion for the physician! The house and

offices being located in the older settlements, there is seldom a chance of selection; but in new settlements, much may be done, for on almost every one hundred acres of improvable land, there may some healthy elevated place be found, on which the dwelling-house ought to be erected. Here the first clearing ought to be made, and if possible ten or twenty acres opened to the sun, and seeded down, a year before the family of the settler arrives. I esteem all countries covered with deciduous timber unhealthy, but not so much so as the western prairies, whose luxuriant herbage untouched by the mower's scythe, springs up to fall and decay, and in its decomposition to poison the air; but the axe and fire in the one, the scythe and the plough in the other, in process of time, will, for the planter, remedy these evils.

In locating a site for a town or a village, the salubrity of the spot is of the first importance; without this the place can never flourish; no commercial advantage is to be put in competition. The enterprise of man may create conveniences for trade in almost any place, but his ingenuity cannot ensure health to the inhabitants, in an unfavourable location. The States of Louisiana, Mississippi, Alabama, and the Floridas, afford ample room for reflection on this subject. From the Balize to the narrows of New-York, there is an extensive coast to be protected. In choosing points to be fortified and stations for troops, more evil may be incurred, than is to be dreaded from the most desperate enemy, and disease may destroy more than war. These stations ought to be garrisoned by men accustomed to the climate, and if possible recruited in the neighbourhood.

There are many stations along our southern coasts, in the Floridas, and on the Mississippi, which would prove as fatal to New-England troops, as the island of Ceylon does to the British, in some parts of which latter, a whole regiment will perish in three years. It appears from accurate returns, that seven-eighths of the British army who die of disease, fall victims to the insalubrity of the stations in their colonial dependencies. The Terre au Bœuf tragedy, was a warning which we should not forget.

In the prevention of Endemic disease, much may be done by care and prudence: almost every obstacle will yield to human industry. Egypt, now at times the hot-bed of plague and pestilence, was anciently almost a stranger to sickness. The Campania, now uninhabitable, was formerly the residence of the Roman nobility. What more striking proof can we have of the all-conquering power of human exertion and perseverance, than the number of populous cities built on the alluvion formed by the Rhine? Here the industrious Batavian not only bids defiance to Neptune, from whose domain he has won his territory, but by unremitting attention to cleanliness, he enjoys in his submarine habitations among bogs and marshes, an exemption from disease, often greater than that of the nastier nations in his neighbourhood, notwithstanding their superior location. The Hollander, carrying his habits of cleanliness on board his ships, ridicules the idea of importation, and makes no use of expurgators. I have seen an extensive district, where half a century ago no stranger could remain a week during the harvest months, without laying the foundation of an ague or fever, but which at this time is allowed to be the most fertile, and best cultivated in the British Isle, and where these diseases are unknown. But I need not depart from the county where I now live for an example of the effect of cultivation; when Oneida was first settled, Agues, Remittents, Dysenteries, and other Endemic Diseases were common; we may now vie with any section of the union, or perhaps of the universe, for exemption from these maladies. Perhaps it might be prudent to stop here, but I find it difficult to forego the opportunity which your kindness has this day afforded me, of giving some evidence of the interest, which in common with my fellow-citizens, I take in the prosperity of the capital, and of throwing my mite of evidence in what I consider the side of humanity. Placed in this seat by your suffrages, I will not conceal that I feel a pride in being a citizen of the first state in the union, whose chief city is now the emporium of America, and which has the means of becoming the first commercial city in the world. I cannot at

this time dwell on the vast advantages she possesses, nor the immense territory and numerous population which through this spot, must hold intercourse with the rest of the world. I confine myself to some observations on its locality, which in point of salubrity, I feel warranted in asserting is superior to any city of magnitude, of which mention is made either in modern or ancient history. Why then does disease at times visit this highly favoured spot? It is neither " the sun, showers, nor soil," that make New-York at times the seat of pestilence. Let it be remembered, that this place was the head-quarters of the British army, the rendezvous of her fleets, and almost the only point of intercourse between this continent, and not only the West Indies, but almost everywhere else during the chief period of the revolutionary war; yet both citizens and troops remained healthy. Perhaps a parallel instance cannot be found in history. This fact speaks volumes for the natural salubrity of the place. A glance at the plan of the city shows its advantageous position,—a tongue or peninsula of primary formation, and sufficient elevation, stretching into an extensive bay, open on the south to the sea breeze, and bounded by two noble rivers, whose rocky shores afford neither swamp nor marshes. On my arrival at New-York, in 1785, I found the whole space between the east side of Broadway and the river was vacant; it was a sandy soil, with a gradual descent to the west, at whose foot the tide washed a sand and gravel beach: this shore when fanned with the exhilarating westerly breeze, which had swept the surface of the noble Hudson, might have been selected by Hygeia, as her chosen abode. The citizens of New-York, at that time bore in their faces the bloom of health, and no signs of Endemic Disease were discernible in their looks. Ten years afterward my business called me to the capital, but the change I found in the looks of the citizens astonished me; those living near the docks and wharves, indeed on most of the streets along the East River, had the pale sallow look, the yellow skin and muddy eyes, with which I had become familiar in the lake country, during the preceding four years.

The inhabitants bore the marks of Endemic Disease, and on inquiry, I found that the disorder that raged in the city, had been accompanied with the same symptoms as that which prevailed in the country. A most intimate friend then resided in the lower part of Pearl-street; he had lost a son and daughter, and barely survived himself, while his eldest daughter, who nursed her relations, had escaped the fever. Although there was neither swamp or marsh, yet sources of disease were not wanting where vessels formerly lay. I found spacious streets, and elegant houses, slips and basins filled up, and many acres gained from the sea, and converted as I was informed, not into airy land, but a mass of putrefiable stuff, with which the most noxious swamp in Genesee could not compare. The North River side, where encroachment had not commenced, still remained healthy, and proved a safe retreat for the afflicted citizens.

In the spring of 1820, I was again in the city, and witnessed the improvements going on, on the west side, the consequences of which became visible in 1822. Had the bank of the North River been left as it was originally, the tide would have removed all the filth brought down the cross streets, and all the sugar boxes ever brought from Havana, would never have infected a spot large enough for a moscheto to alight on.

In the country it often requires years, sometimes ages, to conquer the source of disease, for vegetation annually supplies the pabulum. In cities, provided their location be favourable, it is man who works his own destruction, first by his improvidence, next by his negligence. When the streets of London were filled with filth, and privies remained undisturbed for years under every dwelling, that city was annoyed with plagues and other diseases: for the last century and a half she has been exempt, although her intercourse with Asia, Africa, and America, has increased tenfold. Why does the plague that often ravages Turkey, never visit Persia? Because the Persians are the neatest people in the world, never permitting vegetable or animal matter to putrefy on the surface. They are the Hollanders of Asia.

If her citizens do not mar her destiny, New-York must become in a future, perhaps not distant period, the emporium of the world, or like ancient Carthage, sit the queen of the ocean. But if this city is to be infested every few years by malignant fever, if her citizens must leave their homes and interrupt their commercial concerns, some other place may attract her trade, and her customers form new connexions. That this great evil may be avoided, on my mind rests no doubt. Quarantines have been faithfully tried, but are found wanting. At the risk of being charged with vanity, I, a back-woodsman, will submit my plan. Let a wall of perfect masonry, laid in water-proof lime, and connected with iron clamps, be run from Greenwich to the west Battery, and from where Fort Clinton stood to Corlaers Hook, the face of these walls kept sacredly clear of all additions, so that the tides may uninterruptedly sweep the whole front, the space behind the wall filled up with the primary rock, which abounds on the shores of both rivers. Or imitating the New-Orleans plan, so much per ton may be paid for clean ballast deposited on the spot. Thus the basins and slips, those receptacles of filth, and nurseries of disease, from whose effluvia the stranger and sailor often sicken and die, would be done away with. On the space gained, a line of warehouses might be erected suitable to the prospects of the city. In front of the wall at a suitable distance, and connected therewith by bridges, a range of wharves could be formed, which would answer the purposes of deposite, and prove a safe harbour for the river craft and coasters. A deep and wide cut, in the direction of Canal-street, from river to river, so that the tide might pass, ought to be made. Here the canal boats from the west and north would assemble, secured from the southern gales, which neither their sides or gunwales are well calculated to support. Every sewer in the city should be filled up; there is not sufficient descent for their quick discharge, and our powerful sun penetrates much deeper than in the middle or northern Europe, where sewers are in use. Every perishable substance ought to be left on the surface, where it may meet the eye, where it must soon be

dried by the sun, like our hay, or be removed by the scavenger. The corporation has done wisely in forbidding interments within the city. The records of medicine abound with the most indubitable facts of the dreadful effects arising from the decomposition of animal substance. The wise Romans preserved the ashes of their ancestors in beautiful urns; and perhaps this was a mode preferable to resigning their remains as a prey to the worm, and a poison to the living. The delicate Hindoo, ascends the funeral pile of her husband. Custom is every thing. The Chinese find the most valuable manure in what with us is a great nuisance. The formation of poudrette, as practised in France, would fertilize our fields, and be a valuable relief to the inhabitants of cities. Pure and good water from a distance would be a great desideratum. The filterings used in the city are extremely offensive, especially to the stomach of a stranger. One ounce of prevention is better than a pound of cure. Probably before the commencement of another century, the island of Manhattan will be thickly covered with human habitations. He whose patriotic endeavours would ensure health to such a number of his fellow-creatures, would be more worthy of a monument than the proudest hero of the age; nay, if we may believe the Roman orator, he would approach nearer the divine nature: Homines enim ad Deos, nulla re, proprius accedunt, quam salutem hominibus dando.

With timely precaution, and proper regulations rigidly enforced, the port and city of New-York (by their excellent position) may be made as healthy as the same extent of surface in any section of the globe, where Endemic Fever could no more exist than at the pine orchard in the Blue Mountains.

It may be perceived, that in common with those whose chief residence has been in countries where Endemic Fever is prevalent, I believe in the domestic origin of yellow fever. I have never met with a gentleman from the East or West Indies, nor even from the southern states, whose residence was on the tide waters, who entertained a doubt on the subject. We know that every or almost every malignant case is attended with yel-

low skin, and almost every fatal one closed with black vomit, or the vomiting of black matter spoken of by Hippocrates.

The idea of contagion was the trick of a crafty priest, who, with the aid of a physician, thereby frightened a council from Trent to his city of Bologna, as the pestilence was said to have a partiality for noble blood. The shocking scenes which took place in Spain, even as late as 1821, ought to warn the contagionists of the dangerous tendency of their doctrine. At Barcelona and Barcelonetta, when the wretched inhabitants sought refuge in the country, they were met by their friends with firearms, forced back to the source of pestilence, where, to complete the tragedy, the government surrounded them with a cordon of troops, thereby condemning them to inevitable destruction. Yet we have the evidence of the intrepid O'Halloran, and the veteran Jackson, confirmed by a memorial from many respectable French, English, and I am happy to add, Spanish physicians, that the disease of the peninsula was neither imported nor contagious, but the Endemic of the country. From the medical ranks of the universe, a more proper person than the venerable Jackson could not have been selected, to ascertain the real state of the case; his long residence in the West Indies, the years he passed in our southern states, qualified him peculiarly for the task. Actuated by the sublime love of science, and most zealous philanthropy, at his own expense, and the risk of his life, this second Howard, at the age of seventy, left his friends and home, passing into a foreign country, to examine at its source the cause of disease. To you who know him by his excellent publications on fever, I need not add that he alone is a host. Indeed the English physicians had already begun to open their eyes on this subject: the countrymen of Bacon and Newton will not listen long to sophistry, even from respectable sources. Many of the most respectable French, and even Spanish physicians, have correct ideas on the subject. The nineteenth century will not be disgraced by Galilean recantations and auto-de-fés of philosophical works. It is with much satisfaction that I state, the world is principally indebted to American physicians for true views on that sub-

ject. Need I mention the name of the scientific Ramsay; the magnanimous Rush, who honourably acknowledged his first mistake; and last, though not least, he who is yet spared to us, an honour to the profession, and a blessing to his country, Philip Syng Physick? I might add, I believe, the name of every gentleman in the excellent Medical Schools of Baltimore and Philadelphia; nor can we forget our own Miller, Smith, and Bayley; and those respectable gentlemen who conducted the Medical Repository, a work which, for erudition and science, in my humble opinion, is not second to any either in America or Europe. It must be highly gratifying to the gentlemen now living, who have conducted this work, to observe that the opinions they zealously and invariably supported, are making rapid progress through the civilized world. My predilection for the Repository does not render me insensible to the merits of other American Medical Journals, which I esteem most honourable proofs of the science and literary acquirements of our country, and complete refutations of any sneers, that may, perhaps inadvertently, have escaped our professed friends across the water. We know, from the materials and construction of vessels, that they are liable to decay. Even line of battle ships, built for the British navy, have been found rotten before they were launched, and pronounced not seaworthy before they reached the ocean. Perhaps there is no place equal to the unventilated hold of a vessel, to promote vegetable putrefaction; hence the well-authenticated cases of Endemic Fever, arising on shipboard. A vessel, with a decaying cargo or foul hold, arrives at our wharves; the seamen have hitherto escaped by the gradual exposure, but the visitants from a purer air sicken and die: here is indeed importation of the cause, to prevent which quarantines are useful. But causes of another kind happen more frequently. A clean ship, with a sound cargo and healthy crew, arrives at a seaport in the month of July or August: the effluvium from the slips, basins, or wharves, has not yet acquired virulence sufficient to affect the acclimated citizens; but the seamen, accustomed to the pure air of the ocean, fall victims to the deleterious emanation: by

and by, as the poison gains strength, the citizens become affected, and the case of the unfortunate sailor is hunted up as proof positive of importation. If time would permit, I might enlarge on this topic, and show its importance to the statesman, politician, and philanthropist; what evils result from mistaken views on the subject; how vexatious, absurd, useless, and inefficient, some of the quarantine regulations are, creating not only loss of property, but hazard of life. I might show, from the reports of physicians, both as individuals and in incorporations, from the boards of health of the different cities from Mobile to Philadelphia; I might cite the opinion of the president of the board of the latter city, relating to this subject, in 1820; the reports of the board of New-York, in 1822: from which it appears, that in each city, although upwards of one hundred sick with the fever were removed to other and populous parts of the cities, yet not in a single instance was the disease communicated. I might refer you to the experiment of M. Guyon of Port Royal, Martinique, as related in the Revue Medicale, for February last. M. G. put on the shirt, while yet warm, of a man in yellow fever, wore it two hours, inoculated himself repeatedly with matter from the blisters, drank the black vomit; he went into the bed soiled with various excrements of a soldier sick with yellow fever, and lay in it for six and a half hours. This patient died, and in his stomach was found a large quantity of black matter, yet M. G. remained in perfect health. It would be a waste of time to recapitulate the innumerable well authenticated proofs of the non-contagious nature of yellow fever, which, as Dr. Good states, is one of the severest and most fatal forms, under which the malignant remittent shows itself. The very few respectable physicians in this state, who still contend for the contagious nature of the yellow fever, fortunately confine the contagious attribute to the contaminated air of what is called the infected district. Now, although I am ignorant of the analogy by which the idea may be supported, that a disease can be contagious at one place, and not at another; neither do I know of any data to distinguish between the effect of impure air and contagion,

especially since the presence of the former can only be known by the result; yet I think it highly fortunate, that the foul air is by both parties deemed the *sine qua non*, without which the disease cannot exist: the prevention of this state of atmosphere is therefore the chief end to be kept in view; nor till that exists, can any very serious consequences result from importation. Had the Spaniards entertained a similar opinion of the limited power of contagion, they would not have driven their countrymen from the hills, or surrounded them with cordons of troops. But let us not be too severe on the Spaniards; since in our own country, among a people pre-eminent for intelligence and humanity, a poor woman was abandoned in the night, and found dead next morning, with an infant at her breast. This never could have happened at Charleston; yet the Carolinians are not more benevolent than the people of Connecticut; but amidst the marshes and swamps, interspersed with the sands of their alluvion, the former have by experience acquired more just views of Endemic Fever, than the latter can attain among their rocky hills and ridges of primary formation.

ART. II. REMARKS *on the* EUPHORBIA HYPERICIFOLIA. By WILLIAM ZOLLICKOFFER, M. D., of Maryland; corresponding member of the Medico-Botanical Society of London, and honorary member of many learned bodies;—in a letter to the Hon. SAMUEL L. MITCHILL, M. D., &c. dated Middleburgh, Maryland, Feb. 14, 1824.

IT is with pleasure that I present the medical profession with the following remarks, in relation to the remedial powers of the Euphorbia Hypericifolia, the medicinal virtues of which have heretofore been unnoticed by the various writers on the Materia Medica.

This plant, which is exclusively a native of the United States, attracted my attention in the year 1819, when I determined to enter into an experimental investigation of its

virtues, in order to become acquainted with its true medicinal character; but the various duties connected with my professional avocations, prevented me from embracing a satisfactory opportunity until within a very recent period, when I made the necessary examination, the result of which is communicated through the medium of this paper.

The Euphorbia Hypericifolia delights in a rich and prolific soil, and is an inhabitant of gardens and other fertile situations. It is recognised by the common and local appellations of Black-pursely, Milk-pursely, Milk-weed, &c. Michaux, who doubtless was well acquainted with it, has presented us with the succeeding description of its specific character: "Euphorbia Hypericifolia, glabra dichotemi, ramosissima, erectiuscula-patula, ramis divaricatis; foliis oppositis; subfalcato oblongis, argute serratis, ramusculis summitate fasciculatim multiflores."

This species of Euphorbia is an annual plant, which grows to the height of a foot, and is rather procumbent. It has a smooth stalk, which is repeatedly forked with divaricated branches. The leaves, which are opposite and oblong, are somewhat falciform, and deeply serrated; these are often covered with purple spots. The flowers, which appear in August and September, are white, and situated in numerous quantities on the extremity of the small branches. This plant, of which I perceive there is another variety, belongs to the eleventh class Dodecandra, the third order Trigynia, and the natural order Tricoccæ of Linnæus, and Euphorbia of Jussieu.

In the course of my experimental inquiry on the Euphorbia Hypericifolia, I digested several portions of the powdered plant in sulphuric ether and alcohol. The ethereal solution gave a precipitate upon the addition of alcohol. The alcoholic preparation assumed a pearly turbidness when distilled water was added. Both the ethereal and alcoholic solutions, upon being evaporated, afforded a residuum, which burnt with great vividness, and exhibited a flame much like that resulting from the combustion of the spirits of wine. The infusion

and decoction in distilled water produced a copious precipitate, when either gelatin, or the sulphate of iron, was added. From these results we may reasonably conclude, that this plant contains caoutchouc, resin, and tannin.

In its sensible and operative qualities, this interesting indigenous production differs very materially from all the species belonging to the genus Euphorbia, hitherto known. Its taste is somewhat sweetish, which is succeeded by a considerable degree of astringency. In its effects on the animal economy, it is slightly narcotic and potently astringent.

As a remedial agent, the article under consideration is richly deserving of a conspicuous situation in the Materia Medica. Its astringent power is such as to render it a highly important and interesting remedy, in the treatment of those cases of disease, in which many of the valuable articles that are included in this class of medicines, have been exhibited with the most unequivocal and unparalleled success. I have, however, found it particularly beneficial in several of the diseases of the alimentary canal. The slight narcotic property that it possesses, renders it a more salutary and efficacious remedy, than the most of our astringents, in consequence of its allaying the sensibility of the parts with which it comes in contact, and thereby affording relief from pain, while by its astringent operation, tone is imparted to the debilitated vessels, which restores to them the performance of their destined functions.

In dysentery, I have directed the internal exhibition of the Euphorbia Hypericifolia, and that with the happiest results, where the true dysenteric symptoms have continued, after the inflammatory diathesis has been subdued, by the adoption of the most efficient antiphlogistic means, with which a knowledge of the science of our profession acquaints us. It is however, under circumstances of this kind only, that I can conscientiously present it to the medical public, as a remedy of no small degree of importance, from a firm persuasion of the internal administration of astringents being counter-indicated, so long as the pyrexia continues.

Diarrhœa, a malady with which the inhabitants of almost every section of the globe are more or less affected, is a disease which, although in the generality of cases, seldom proves so eminently dangerous, as the one that has just been noticed; nevertheless, it not unfrequently, from its debilitating influence, undermines the vital energies, and consequently acts as an outlet to human existence. In this disease, I can recommend this species of Euphorbia: but previous to prescribing it, I have been in the habit of directing a dose of the sub. mur. hyd. in conjunction with the ol. ricini, or some other purgative medicine, with the view of removing any vitiated secretions that might be present in the intestinal canal. When this disease has been of long standing, from a protracted debility of the bowels, this remedial agent will be found a prompt and effectual medicine.

The following plan I have adopted, in relation to its preparation for administration, as well as for its mode of exhibition. The dose is intended for an adult; which can be proportioned according to the age of the patient.

℞ Euphorbiæ hypericifoliæ foliorum exsiccat. ʒfs. Infunde in octario aquæ bulientis, capiat cochlearia magna unaquaque horâ donec morbi symtomata cessantur.

I should suppose, from the operative powers of the Euphorbia Hypericifolia, that it might likewise be used with advantage in cholera infantum; in this disease I have never used it, and consequently can say nothing upon its utility.

I now close this subject, by expressing a wish, that those connected with the profession, who feel deeply interested in the improvement of the materia medica of our country, will not only test the efficacy of the plant above mentioned, in the diseases in which I have recommended it, but will also test its usefulness in the diseases, in which astringent remedies are indicated.

ART. III. REMARKS *on the* DISEASES, *received in the New-York Hospital during the months of December*, 1823, *and January and February*, 1824. By DAVID HOSACK, M. D. Professor of the Theory and Practice of Physic and Clinical Medicine, &c.

TO THE EDITORS OF THE
NEW-YORK MEDICAL AND PHYSICAL JOURNAL.

New-York, March 1st, 1824.

GENTLEMEN,

I have just finished my annual tour of duty at the New-York Hospital. If the subjoined enumeration of the diseases, which have been received in that institution during the last three months of my attendance, and the memoranda I have made of the most interesting circumstances that have occurred in the progress and treatment of those diseases, and of the means that have been found most successful in the relief and restoration of those that recovered, may be deemed of sufficient value, to merit a place in your journal, they are at your service.

I am, Gentlemen,
respectfully yours,
DAVID HOSACK.

Diseases of the New-York Hospital.

Diseases.	Cured	Died.	Relieved	Remain	Total.
Amenorrhœa - - -			1		1
Apoplexia - - - -		1			1
Bronchitis - - - -				1	1
Chorea - - - - -	1		1	1	3
Cephalalgia - - -	4				4
Constipatio - - - -	1				1
Delirium Tremens - -				1	1
Diarrhœa - - - -	6	2		1	9
Dysenteria - - - -	1		1	1	3
Dyspepsia - - - -	2				2

Diseases.	Cured.	Died.	Relieved.	Remain.	Total.
Epilepsia - - - - -		1		1	2
Epistaxis - - - - -	1			1	2
Febres Intermittentes -	17			2	19
Febres continuæ - -	5				5
Hematemesis - - -	1				1
Hemiplegia - - -				1	1
Hepatitis - - - - -	2	1	1	2	6
Hydrops - - - - -	1	1		3	5
Hysteritis - - - - -			1	1	2
Laryngitis - - - - -	1				1
Leucorrhœa - - -				1	1
Lupus - - - - - -				1	1
Menorrhagia - - -	1				1
Paralysis - - - - -	1			4	5
Phthisis Pulmonalis -	2	12		8	22
Pneumonia - - - - -	22	4		6	32
Rheumatismus - - -	28			14	42
Syphilis - - - - -	11			5	16
Splenitis - - - - -	1			1	2
Tympanitis - - - - -	1			1	2
Tumor - - - - - -	1				1
Variola - - - - - -			1		1
Urethritis - - - - -	2			4	6
	113	22	6	61	202

Amenorrhœa.—The case above referred to was of ten years standing, and had resisted all the ordinary aloetic and mercurial emmenagogues that had been prescribed. It was relieved by the use of an injection per vaginam, of the aqua ammoniæ and rain water, in the proportion of half a dram of the former to eight ounces of the latter; the injection was administered three times a day. It excited a slight degree of irritation: in about five weeks the catamenia were restored.

Chorea.—This case occurred in a young girl aged twelve years, of a very delicate habit of body. She was received in the house on the 2d day of December; the bowels having been evacuated by a dose of rhubarb and magnesia, I prescribed for her the usual course of treatment that I have found

most successful in this disease, and which has rarely failed to effect a cure. This consisted of the carbonate of iron given in doses of ten grains, in combination with two of ginger, night and morning, the tincture of castor given to the quantity of two drams three times a day, and the cold bath made use of three times a week; finding that the patient did not receive the same degree of relief that I had been accustomed to witness from the use of those means, on the 28th day of December, I directed five drops of Fowler's solution to be given three times a day. This has effected a cure. The same preparation of arsenic has also been very successfully exhibited in four cases of Cephalalgia, as it was denominated in the books of the house, but which exhibited all the acute sufferings and peculiar symptoms of Neuralgia.

The cases of *Chronic Diarrhœa* as usual, were obstinate, and very difficult to be controlled. Most of them had been contracted in the tropics, and were the sequelæ of dysentery and long continued fevers, in which large quantities of mercury had been exhibited: they also had been of long standing, previous to their admission into the Hospital. Of eight cases thus admitted, two proved fatal: the others were relieved by the application of blisters to the lower extremities, and antimonial ointment rubbed upon the abdomen three times a day, until an eruption was produced; an anodyne at bed time was also a valuable auxiliary. In one case, in which the disease was attended with fever, and great heat and dryness of the skin, much benefit was derived from the use of the spiritus mindereri, combined with a small quantity of laudanum. In one of the above cases, some advantage appeared to be received from the acetate of lead in combination with opium; but in other cases it did not fulfil the expectations usually formed of its use. I have, after frequent trials, and as frequent disappointments, long since been convinced of the inefficacy of this medicine in restraining excessive discharges, whether hemorrhagic or otherwise, and that the credit usually attributed to the acetate of lead as an astringent, is due to the opium with which it is ordinarily associated.

In private practice I have sometimes prescribed the infusion of Quassia simarouba in chronic diarrhœa, and with the same good effects that have been ascribed to it by Dr. Huck* and other army physicians, who have recommended its use in this obstinate complaint. But in Hospital practice I have oftentimes given it without the least sensible effect in restraining the disease. A swathe of flannel, and a compress applied to the belly, in the manner recommended by the late Dr. Dewar,† of Edinburgh, I have also found highly useful, not only in cases of this nature, but in the ordinary diarrhœa and cholera infantum of the summer season.

In one of the cases of *Dyspepsia* in the above enumeration, the disease was attended with excessive vomiting, and the rejection of every article that had been taken, whether of food or medicine. In this case I directed a table-spoonful of milk to be taken every half hour, as in the cases recorded by Dr. William Hunter,‡ prohibiting any thing else to be given; from this time the vomiting ceased, and in a few days the patient was entirely restored.

Intermittent fevers, you will observe, were of frequent occurrence during the last three months. As in a former year,§ I again prescribed the prussiate of iron, so highly recommended by Dr. Zollickoffer, but not with the same success which I had observed from its use at that time; indeed in most cases it disappointed me.

The Quinine was then directed; in some cases given in the form of the sulphate, and in others that of the super-sulphate prepared as follows:—

℞.	Sulphat. Quinin.	ʒi
	Elixir vitriol.	ʒfs
	Syrup Zingib.	ʒij

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* Lond. Obs. & Inquiries.

† Observations on Dysentery.

‡ See Medical Obs. & Inquiries of London, Vol. VI. p. 310.

§ Medical and Physical Journal, Vol. II. p. 199

Of this mixture, a teaspoonful was given every hour, and in every case, with the most perfect success, in preventing the return of the paroxysm; the minutes kept by the house physician, Mr. Rhinelander, also show this formula, containing the superaddition of the sulphuric acid to possess much greater efficacy than the sulphate, as it is ordinarily exhibited.

In a case of *Noli me tangere*, the Lupus of Willan; which had been of seven years standing, and connected with a scrofulous state of the habit, great benefit was derived from the arsenic directed in the form of Justamond's ointment; and after some days' use of it, succeeded by white precipitate ointment; the patient, at the same time, making use of the decoction of the woods. In similar affections of the lips, or alæ of the nose, I have rarely failed to arrest their progress by the application of arsenic prepared agreeably to the formula of Justamond, aiding its operation by the decoction of sarsaparilla.

Phthisis pulmonalis in its advanced stage, rarely yields to the healing art. In several of the above cases, however, the most decided benefit was obtained from the tonic treatment, particularly from the bitter infusion in combination with the sulphuric acid, and by the use of the fumes of boiling tar, as recommended by Sir Alexander Crichton. In one case of a most unpromising nature, the latter remedy, in conjunction with the free use of tar water, taken from a pint to a quart daily, effected a cure. The patient came into the house greatly exhausted, expectorating at least half a pint of the most offensive purulent matter in twenty-four hours. By the use of the last mentioned remedies, this excessive drain was gradually lessened, and in six weeks from the time the patient commenced the use of the tar water and the tar fumigation, he was discharged from the hospital perfectly cured.

Rheumatism, especially in the chronic form, constitutes a large portion of the diseases admitted into the hospital in the autumn and winter. In former years, in addition to the warm bath, the decoction of the woods, Dover's powder, the volatile tincture of guiacum, and blisters to the part affected, I have observed the most decided benefit from the use of the flannel roller, as directed by Dr. Balfour; but in the last three months, I have had recourse

to the antimonial ointment, quickened by the addition of the tincture of cantharides, or of blistering ointment, with more effect than from any local application I have ever directed in this disease. The formula employed, is as follows:—

℞	Tart. Antimon.	ʒiij.
	Adip. Suill.	℥i.
	Tinct. Lyttæ	gtt xxx.
	Vel. Ung. Vesicat.	ʒi. M.

The limb or part affected, was directed to be rubbed three times a day with this ointment; an eruption of pustules soon succeeded, which very rarely failed to afford relief. In some instances, in which the rheumatic affection was attended with an enlargement or unusual laxity of the joint, great advantage was obtained from the celebrated Hungarian plaster. This consists of the gum ammoniac, dissolved to saturation in the vinegar of squills; a flannel cloth dipped in this liquid, and closely applied to the affected joint, not only produced an excitement and eruption similar to the antimonial ointment, but when dried and contracted around the joint, afforded the additional advantage of a mechanical support to the relaxed parts, in aid of the excitement derived from the stimulating ingredients composing the plaister.

Syphilis.—In the treatment of this disease, I have continued as heretofore, in private practice, and in my attendance upon the public institutions of this city, to prefer those preparations of mercury, which are least calculated to affect the mouth, viz. the corrosive sublimate and the Plummer's pill. As a rule, with few exceptions, I have found the internal preferable to the external use of mercury; and the mercurial salt, which from an ample experience, I recommend as combining most advantages, and as agreeing best with the greatest number of cases, is the oxymuriate of mercury. This salt, either in the form of pill or of solution, I have uniformly employed with success for the cure of syphilis, not only when the disease has been recently contracted, but in the most malignant form which it assumes when it has been neglected or injudiciously managed. A valuable auxiliary will also be found in the decoction of the lig-

num guiaci and the radix sarsaparillæ, as powerful alteratives. Contrary to the opinion of Mr. Pearson,* the corrosive sublimate has invariably been found to be the remedy best calculated for the removal of lues venerea both in its primary and secondary stages. It is somewhat singular that this efficient preparation should have been so long and so generally laid aside after the powerful evidence in its favour advanced by Dr. Locker, of the Vienna hospital, and other equally distinguished clinical observers. I must also protest against the salivating system by friction with mercurial ointment and the use of calomel, so commonly had recourse to. It is true that those forms of exhibiting mercury very soon affect the gums, but it is no less true, that when mercury exerts its influence upon the salivary glands in proportion as this influence is manifested, it ceases to operate upon the other excretions of the system, and consequently is less active in eliminating from the body the poison of the disease. Salivation it is now well ascertained, is unnecessary in the treatment of syphilis, and the knowledge of this truth cannot be too extensively circulated. Moreover, I am persuaded that cutaneous affections from mercury more frequently arise from its external than from its internal use. In the treatment of chancres and the ulcers of buboes when opened, the yellow, and the black washes, were found highly advantageous according to the state of the parts.

ART. IV. A CASE *of* HYDROPHOBIA *successfully treated by cold Affusion.* By DAVID R. ARNELL, M. D., President of the Medical Society of Orange county.

JOSHUA CASE, aged 17, apprentice to a blacksmith in this town (Goshen) was bitten on the leg by a small strange dog which came into the shop where he was at work on the 8th of November, 1811. The dog looked sickly at the time he entered the shop, and the boy undertook to drive him out, when

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* See his work on the effects of various articles of the materia medica in Lues Venerea.

the bite was given : no apprehensions, however, were suggested of the dog being rabid until the afternoon of the 17th. Being sabbath, the family were all about the house, and it was observed by some that the boy was very dull and stupid, frequently starting, but taking little notice of any one around him. Early in the evening he was requested to go to bed, which he did in an upper room. He had been in bed about an hour, when he arose, got out of an upper window on the roof of the kitchen, where he was discovered, frequently making a noise like the barking or growling of a dog, which first led the family to suppose he was labouring under hydrophobia. I was called to see him about 11 o'clock at night; I found him sitting in a chair with two men behind him, holding him fast in such a position as to prevent him from biting them; as by this time they were convinced he was labouring under all the symptoms of hydrophobic derangement. His pulse was very little, if any, altered from natural; his eyes were dull, and showed very little expression; about once in six minutes he appeared to have convulsions in his throat and jaws; made a hoarse, croaking noise, somewhat resembling the growl of a dog very frequently; and the by-standers said that his breath resembled the smell of a dog, which, however, I could not discover. I procured a large pitcher of water, and urged him to drink some from a tumbler, which produced the same convulsive action of his throat as had previously occurred at regular intervals; the same effects were produced by bringing water in his sight; he refused to drink, but after repeated solicitations and trials, which produced the same results, he attempted to drink, but did not succeed. The dread of water was very evident in his case, and the other symptoms, connected with having received a bite from an animal which had the appearance of being mad, were such as to convince me he was really labouring under the hydrophobic disease. After coming to this conclusion, you may easily imagine the state of my own feelings. I had seen the disease twice before in the human species, both of whom perished under all its horrors; and I had no confidence in any mode of treatment which had been laid down by authors.

The history of this singular disease has indeed been accurately described by writers; but the numerous remedies and plans of treatment prescribed by them are marked either by ignorance, superstition, or want of success. My mind referred me back to the time of that laborious investigator, Boerhaave, who pronounced the complaint "summe inflammatorius." The method of cure accordingly consisted in *copious bleeding*. Dr. Rush, who first admitted the disease to consist in "relaxation;" but afterwards with a candour peculiar to himself, renounced this opinion, declared it to be a "malignant state of fever," and advised the same remedy. I could do no better I thought than to follow their directions, and I bled him about ℥xxiv. When the blood began to flow, the symptoms increased, and continued to do so until the blood stopped. The blood had no unusual appearance, neither did it make any alteration in his complaint. The neighbours who were present, then advised to tie him with a rope, in order to prevent him from biting any one; to do which he made frequent attempts, when the convulsions were on him. He understood well what was said to him, and showed a determination to resist, if any attempts were made for that purpose. He endeavoured to get away from those who held him, and in their attempts to secure him, they threw him on the floor directly on his back. The pitcher of water was standing on the table, which immediately suggested to my mind the propriety of applying this remedy until the morbid and diseased action of the system should be destroyed, or the diseased action should overcome the system, which would either cure him or put a period to his sufferings, as I considered that death was to be the inevitable consequence. Accordingly I began to pour the cold water in a small and constant stream into his face; his whole system was immediately very much convulsed; more water was procured, and the stream continued about two hours and a half; during all which period the convulsions were continued; but at this time every convulsive action ceased, he was perfectly calm, had no dread of water, as he was nearly covered with it; in a few minutes he got up himself, walked to the fire, and has had no symptoms of the disease since.

I am confident that this was a case of real hydrophobia, and that it was cured by the long and continued use of the cold water; it might have been assisted by the large bleeding which he had a short time before the application of the water. I am more convinced of the efficacy of this treatment by a case lately published in the Philadelphia Medical Recorder, where the patient was made to drink large quantities of cold water, which had the same good effect, although the physicians, from that circumstance, concluded the case was not hydrophobia; yet, as the horror of water was overcome by drinking water, which is the only circumstance which takes from it the character of this disease, I conclude it produced the cure. A case lately published by G. Magendie, where a patient was treated at the Hotel Dieu of Paris, by injecting warm water into the vein of the fore-arm with success, strengthens this opinion. If I was called to another patient labouring under the hydrophobia, I would pursue the course which I have detailed above.

Art. V. A case of Varicocele *cured by tying the Spermatic Artery.* By Stephen Brown, M. D. of New-York.

A varicose enlargement of the veins of the spermatic chord is a disease of not unfrequent occurrence; and although in the generality of cases the inconvenience arising from it is so slight as not to call for surgical interference, yet it sometimes proves a disease of serious inconvenience and suffering. When the ordinary means have proved ineffectual in relieving the sufferer, an operation has, in some instances, been resorted to, and the testis itself has been removed by respectable surgeons, as the only means of answering the purpose intended.

Mr. Charles Bell states, that he assisted, in a few instances, in the operation of cutting down upon the coil of enlarged veins, passing a ligature around them in two different places, and then dissecting out an intermediate portion, and with at least partial success. The following case will perhaps be regarded not without interest.

Mr. H. aged 22 years, and a farmer by occupation, while ploughing in his field in June 1821, by accident received a violent blow upon the spermatic chord, just below Poupart's ligament. Shortly after this accident the spermatic vein began to enlarge, and soon formed a considerable tumour, extending from the testis upward to the abdominal ring. The tumour continued rather to increase in size until June 1822, when he came to this city for surgical aid, and placed himself under the care of a respectable physician. The man stated, that his disease had been troublesome, and at times distressing; that often, for several days in succession, it had been so painful as to prevent him from pursuing his daily occupation, and said, if nothing short of the extirpation of the testis would give him relief, he was ready and willing to have that operation performed.

The physician, after making an ineffectual trial of the ordinary means, requested me to see his patient, and proposed an operation, expressing his opinion that the one practised by Mr. Bell, of tying the vein, would probably prove effectual. I suggested the propriety of tying, not only the vein, but the spermatic artery also, which might afford a better chance of removing the disease, as it would directly cut off the current of blood, which was constantly flowing in its natural channel into this vein, and which from disease had lost the power of emptying itself; and that the enlarged vein would after this more certainly contract, and its calibre become destroyed. That according to the laws which govern the circulation, the artery of the vas deferens would become adequate, together with a collateral circulation from the obturator, perineal, and external pudic arteries which distribute minute branches to the scrotum; and in the adult, through the tunica vaginalis, and communicate with the spermatic artery, a sufficient supply of blood would be furnished for nourishment, and all the purposes of this organ; and which would naturally find its way back through the veins accompanying the ramifications of these arteries. He assented: and at his request I performed it in the following manner.

Drawing aside the coil of veins from the other vessels of the chord, I made an incision, two inches in length, upon the enlarged vein, and separated the convolutions which formed the tumour, three inches and a half in length, which appeared as one trunk. Feeling for the artery, I found it closely in contact with the vein, all the way imbedded in a groove, as it were, of its enlarged dimensions, so that the two vessels appeared only as one large vessel, the artery being perceptible only by its pulsation. I passed two ligatures around both vessels, one near the testis, the other about an inch and a half above, and removed an inch of the intermediate portion. The wound was dressed lightly with lint, and the patient put to bed.

After the operation, the patient never suffered any considerable pain, nor had any unusual sensation in the testis. About the 4th day from the operation a little swelling of the testicle, and a slight oedema of the scrotum was perceptible. It began to subside on the sixth day. The under ligature came away on the 10th day; and the swelling of the testicle was much abated. On the 13th day the upper ligature came away, and on the 14th he walked two miles without inconvenience, and on the 23d the wound was healed. At this time there remained a little enlargement of the epididimys. On the 30th he left the city in good spirits, no traces of the enlarged vein being perceptible in any part of the chord.

This man assured me, on leaving the city, that if his complaint gave him further trouble, he should come to the city again for advice. He has never returned, and his physician here, who has had intelligence from him, assures me that the operation effected a complete cure.

The success of this operation shows that the main artery which conveys blood to the testis may be tied, while the circulation will go on sufficiently for the purpose of vitality and nourishment, and probably for the purpose of secretion. This fact demonstrates the incorrectness of the opinion which some have entertained, that to cut off the supply of blood furnished to the testis by the spermatic artery, would be followed by an

absorption of the testicle. This opinion was given to me by a surgeon of high respectability, before the result of the above case was ascertained.

The foregoing operation suggests, as I think, a practicable and useful operation for the cure of some diseases of this organ, by cutting off the main current of blood, and thereby promoting the absorption of morbid enlargements, which might otherwise require extirpation for their cure.

And it appears by recent information, that M. Maunoir, of Geneva, has lately recommended the operation of securing the spermatic artery by *ligature* for the cure of *Sarcocele*, and details two cases of its success, notice of which is taken by Doctor Johnson, in the second volume of his Journal of Medical Science. *

ART. VI. AN ACCOUNT *of the* INFLAMMABLE SPRINGS *in Ontario County, State of New-York, in a letter to the Hon.* STEPHEN VAN RENSSELAER, *Esq. of Albany.* By P. HAYES, M. D. of Canandaigua.

Canandaigua, November 22, 1823.

SIR,

AT the request of Professor Eaton, I propose to give you some account of the springs of inflammable gas in this vicinity.

The most noted of these springs is situated in the town of Bristol, county of Ontario, about nine miles WSW. from Canandaigua, and seventeen or eighteen south of the Erie Canal at Perinton. It is situated in a ravine on the west side of the valley of Mud Creek, which is here called Bristol Hollow. The sides of the ravine, as well as the borders of all the valleys in its vicinity, are formed of shale, which presents the following characters :

Colour, bluish gray; but varying in the different strata, sometimes passing into ash gray; horizontal surface slightly glimmering.

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* See New-York Medical and Physical Journal, Vol. I. p. 123.

Odour, when moistened, bituminous.

Taste, none.

Adheres slightly to the lip and tip of the tongue.

On white paper leaves a brown *trace*, with a slight tinge of red.

Streak, same.

Powder, brown.

Flexibility, slight.

Elasticity, nearly perfect.

A *knife* cuts its with some difficulty.

The *nail* scratches it slightly.

It *scratches* window glass.

It is *brittle*.

Structure slaty. The layers are of various thickness, and adhere together with various force; but the rock may, in general, be split into laminæ from one-eighth to one inch thick. They are considerably undulated, but preserve nearly the same thickness. These laminæ, which are horizontal, are crossed by perpendicular fissures, in various directions, of great extent.

Transverse *fracture*, earthy.

Horizontal *surface*, uneven, undulate, smooth to the touch.

Fragments, tabular.

Specific gravity 2.5.

The powder is not very readily miscible with water, and when mixed with it, leaves a film on the surface. With diluted sulphuric acid, it disengages slowly a few bubbles. Treated firstly with diluted muriatic, and then with strong sulphuric acid, and washed, it leaves a considerable proportion of a black powder, sinking rapidly in water, and having a gritty feel.

Fusible by the blow-pipe.

Crackles in the fire.

The ravine is traversed by a small rivulet, which in summer is nearly dry. Near the termination of the ravine in the valley, the stream approaches the right bank, which is here about twenty feet in height, and eight or ten of it consists of the shale.

From this bank, partly beneath the surface of the water, but principally above it, the gas issues in considerable quantity. When lighted, where it issues from the rock above the level of the surface of the water, it burns with a steady flame. The colour of the flame is deep yellow, scarcely inclining to red, and without any shade of blue. The light and heat evolved are both considerable. The odour is slight, but resembles that of burning pit coal. No smoke is perceptible; but the summit of the flame blackens the contiguous rock.

The following experiments made with this gas seem to prove that it consists principally of a mixture of the light and heavy carburetted hydrogen gases, and that it contains carbonic acid gas, but no sulphuretted hydrogen. Mixed with a small proportion of olifiant gas obtained from alcohol, and inflamed in a proper burner, it forms a brilliant gas light.

Experiments with the Gas.

1st. Into an 8 oz. phial of the gas, caught under water, introduced about 2 oz. water, shook it well, and dropt in about a drachm of a solution of acetas plumbi in distilled water, of the strength of 40 grs. to a pint. Precipitate bluish white, appearing, at first, in striæ. The water of the brook above, and the well water of Canandaigua, gave the same precipitate.

2d. Into an 8 oz. phial of the gas poured about 1 oz. lime water. The water was rendered turbid, and a film appeared on the surface. On shaking the phial, a copious white precipitate was produced, which effervesced briskly with diluted sulphuric acid, and again deposited a white precipitate. The lime water gave no precipitate with the water of the brook.

In this experiment, before shaking the phial, a colourless film, containing particles of the precipitate, extended up the sides of the phial, rising and falling with the water. Was this owing to bituminous matter dissolved in the gas?

There are said to be a number of other places along the ravine, (the bottom of which is nearly level,) to the distance of 80 rods, where smaller streams of the gas issue.

In the town of Middlesex, on the south-eastern side of a valley, called Federal Hollow, one mile from Rushville, and about 21 from the canal at Palmyra, is another locality much more remarkable. For a space extending along the valley, from northeast to southwest, more than half a mile, and in some places, more than a quarter in breadth, numerous springs of inflammable gas have appeared. In a field near the north-eastern extremity of this tract, and at an elevation of 40 or 50 feet from the bottom of the valley, numerous hillocks may be seen, of a few inches in height, and from 2 or 3 to 10 or 12 feet in diameter. They consist of a black mould, and are destitute of vegetation: from these the gas issues; and on digging into the earth beneath, may be obtained in considerable streams. These hillocks have appeared successively, within a period of seven or eight years, although the ground has been cleared much longer. The first indication of their formation, is the disappearance of vegetation at a particular point; this is enlarged, the mould accumulates, and the hillock is gradually formed. In very cold weather, the gas is said to issue from the tops of hollow cylinders of ice, sometimes 2 or 3 feet in height, forming, when lighted in a still evening, a beautiful illumination.

In this field an excavation has been made 10 or 12 feet in depth; but not having reached the rock, no discovery was made. At the south-western extremity, on a level with the bottom of the valley, another excavation was made some years since, of about the same depth, penetrating the rock, which, from the remains of what was thrown out, appears to be the same as that found in Bristol. In making this excavation, I am informed that coal was found; but I have not been able to obtain further particulars. Specimens of coal have also been found on a hill about two miles northeast of the spring in Bristol, at a considerable elevation above the valley of Mud Creek. Not having examined this locality, I subjoin the following account of it, published in the Ontario Repository, of September, 1822.

"Major Simmons of Bristol, has, within a few days, opened a small shaft near the summit of a hill on his farm, but a few

miles from Canandaigua lake. After passing about five feet through a stratum of very fissile clay slate, he struck a layer of bituminous shale, below which, at the depth of six feet from the surface, he discovered a stratum of clean coal, four lines in thickness. This is *black* or *slate* coal, is highly bituminous, kindles readily, and burns with a copious dense flame. On comparison, it is no way inferior to the Ohio or Pittsburgh coal; and although its specific gravity is a little higher, (being 1.31) it does not leave more than 5 1-2 per cent of ashes. It is to be regretted that the difficulty and expense of exploring this range of slate country, will be somewhat increased by the position of its strata, there being a dip of but 15 minutes to the west; yet from the character of the country, and from the success of this small investigation, there can be no doubt of the abundance of first-rate coal in all the slate hills of Canandaigua and Bristol."

The brook, which runs through Federal Hollow, in a south-eastern course, empties into the southern extremity of Canandaigua lake. About two miles below the lowest excavation, it becomes a dead level, and continues so to the lake seven or eight miles further. From the northern extremity of the lake to the canal, is a distance of about twelve miles. According to a survey made in 1820, the lake may be connected with the Erie canal by a lateral canal of nineteen and a half miles in length, with twenty-three locks, the descent being 225 feet. At the present moment, an investigation is making preparatory to an attempt to carry this plan into execution.

I have been informed, on very good authority, that a thin stratum of coal has been discovered in one of the rivers near Genesee river, in Groveland, Livingston county.

From the hills of Graywacke slate, which, in this vicinity, commence from twenty to thirty miles south of the canal, to lake Ontario, I have observed the shale formation in various places. It borders all the valleys which issue to the northward from between those hills, and seems to constitute, almost exclusively, the hills of more moderate elevation which stretch further to the north. It appears to be the same formation which

is observable on the south-eastern shore of lake Erie. In many places I have observed it to be covered with limestone, or to alternate with it.

With sentiments of the highest respect,
I am, Sir, your obedient
and humble servant,
P. HAYES.

To the Hon. Stephen Van Rensselaer.

Art. VII. On *the use of the* Vitriolic Emetics, *in the Treatment of* Cynanche Trachealis. By John W. Francis, M. D. Professor of Obstetrics, and the Diseases of Women and Children.

Although the disease most generally designated among modern physicians, by the name of Cynanche Trachealis, has been the subject of elaborate investigation, there still remain several circumstances concerning it, upon which a satisfactory opinion has not yet been obtained. I am persuaded that croup prevailed, and was known prior to the year 1765, when Dr. Home first called the attention of practitioners to the complaint. The quotations from Ghis, as found in the Institutiones of Burserius; certain passages in the Sepulchretum of Bonetus, and the paper on the Morbus Strangulatorius, by Dr. Starr, in the London Philosophical Transactions of 1750, are among the evidences upon which this belief is founded. According to Ghis, it prevailed very generally at Cremona in 1747 and 1748, and though it severely attacked infants and children, adults were not wholly exempt from it. The last of the cases recorded by Dr Starr, of the disorder which affected the children of Cornwall, in England, in 1749, is evidently a decided instance of cynanche trachealis: some of his preceding observations would seem to apply to a mixed form of the disease, such as has been noticed by more recent authors.

Ample as pathological observation has been, we need further facts to determine the peculiar nature of the inflammation producing croup; and it still remains a debated question.

whether we are justified in attempting to establish the distinction, so pertinaciously maintained by some, of inflammatory and spasmodic croup. As an universal law, inflammation itself, varies in its effects according to the structure and sensibility of parts. The safety of the patient is, in my opinion, best consulted by considering croup as essentially an inflammatory affection, with spasm as almost invariably a coincident symptom. It is in no degree inconsistent with this view of the subject, that croup in different patients, and at different stages, occasionally manifests the predominance of the one or the other of the characters of inflammation or of spasm.

One can easily pardon the views advanced by Underwood, and some other English writers, concerning the nature and treatment of croup, if it is considered that their opinions were promulgated at a time when our pathology of this interesting disease was founded on very limited data. Our clemency is put to a severer test, when we find such sentiments as the following espoused by Dr. Wilson, who is convinced, from a careful attention to the phenomena of croup, "that the primary seat of irritation is in the digestive organs, whence is generated by morbid sympathy, a spasmodic affection of the glottis, ending in inflammation of the mucous membrane of the larynx and trachea, ultimately destroying the action of the lungs, by rendering them impervious."!!

Cheyne, in his Essay on Cynanche Trachealis, considers "an effusion which becomes a tubular membrane lining the inflamed surface," an essential part of his definition of this disorder; and Baillie, in his Morbid Anatomy, states that in croup an adventitious membrane is always formed. I cannot but consider the formation of the membrane as an accidental occurrence in the progress of the disorder; and, in fact, Dr. Cheyne, in a subsequent work,* contradicts his former assertion. Timely and active remedies will generally arrest the formation of the lining membrane, even in cases the most purely inflammatory, and those instances in which more of

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* Pathology of the Membrane of the Larynx and Bronchia. Edin. 1809.

spasm than of inflammation seems to exists, the membrane is perhaps seldom formed at all. I have observed extensive inflammation of the trachea, without the production of the membranous formation, and with scarcely any effusion of either pus or mucus.

In other instances the lining membrane is not limited to the trachea, but extends itself to the bronchiæ. Ghis and Michaelis, as well as other early writers, furnish us with cases of this sort: In his valuable paper on Croup, Professor Hosack has given a view of a morbid preparation, in the possession of Dr. Post of the University of New-York, in which this consequence of the disease is happily illustrated.* In other cases again, the disorder has deeply affected the substance of the lungs.†

Cynanche trachealis may occur during the progress of other diseases. Rollo, Ferriar, Rush, Hosack, and other clinical observers, corroborate this truth. I have myself seen two cases where croup supervened during the existence of cynanche maligna; and in the fall of 1822, attended a young man in this city, whose convalescence from an attack of the yellow fever of that year, was protracted by an affection similar to croup, which occurred about the tenth day of his illness. With regard to the disease described by a late eminent American writer, Dr. Samuel Bard, under the name of angina suffocativa, from a careful examination, I am inclined to coincide in the opinion advanced by Dr. Beck, that it was not idiopathic croup, but the cynanche maligna of nosologists, and that the features of croup, which at times appeared, were the occasional consequence of the primary disorder of the throat extending to the trachea and lungs.‡

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* American Med. and Philosophical Register, vol. II.

† See Cheyne, and other late writers.

‡ See an inquiry into the nature, cause, and cure of the Angina Suffocativa, or sore throat distemper, as it is commonly called by the inhabitants of this city and colony. By Samuel Bard, M. D. Professor, &c. New-York. 1771. Also an Historical Review of some of the earlier American writers on Croup, by John B. Beck, M. D. in New-York Medical and Physical Journal, vol. II.

I have seen cynanche trachealis affect infants within their first year; and we have the best authority for asserting, that it sometimes makes violent seizure on adults. For obvious reasons, the complaint is not so fatal with this last class of subjects. Within a few days, I have seen the more prominent symptoms of croup accompany a case of cynanche laryngea, in a male patient aged about thirty years. Sir James M'Gregor, in his report of the diseases at Bombay, states, that in several of the instances of croup which occurred, the patients were adults.

In this paper I have not intended a treatise on croup, but to call the attention of practitioners to a method of treatment which I found successful in three cases of this disease, where the existence of the membrane rendered the situation of the patients eminently critical. It is universally conceded that our means of relief, in cynanche trachealis, are to be urged during the forming and febrile stages of the disorder; and to American physicians must be awarded the merit of having pointed out the curative indications to attain this desirable object. To the late Dr. Bayley* of this city are we especially indebted, for the introduction of venesection to an extent at once bold and efficient, in order to counteract the inflammatory character of croup, and that too amid the conflicting jealousies and temporizing expedients of rival prescribers. Yet I am not fully prepared to advocate the detraction of blood *ad deliquium animi*, in those cases where the patient's life is jeopardized by reason of the membranous formation. Of the use of other auxiliary remedies, as antimonials, blisters, purgatives, &c. I shall forbear any recommendation at present.

In that almost hopeless state of croup which is induced by effusion at the later period of the complaint, the means of relief resorted to by practitioners are equally numerous and uncertain. Calomel, the polygela seneka, and the lobelia inflata, are perhaps among the foremost of the articles that have been

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* Letter to William Hunter, M. D. of London.

extolled with the greatest confidence. There are many reasons that might be urged in behalf of the employment of calomel, even in large and repeated doses, the blood-vessels having been relieved by previous venesection. After the existence of the membrane, and when the powers of life are on the wane, it is a judicious, and sometimes an available resource; and in the cases, indeed, in which I have found the vitriolic emetics successful, their agency has probably been favoured by that potent mercurial.

CASE I.

In the autumn of 1813 I was called to a case of cynanche trachealis, represented to be formidable and immediately threatening the life of the sufferer. The patient was a female child about two years of age. Through neglect, the disease had uninterruptedly run its course, now at the close of the second day's duration, and had advanced to what may be termed the third or membranous stage of croup. The child has been subjected to the action of one or two cathartic powders, and some other slight means of relief. Its laboured respiration, livid countenance, cold extremities, and great prostration, seemed the harbingers of its immediate death. Its efforts during respiration were evidence of the membranous formation, and every moment seemed to render its situation more alarming. The period for emetics and blood-letting had gone by. I suggested to the afflicted mother that little or no hope could be reasonably entertained of its recovery; but that the remedy to be employed might possibly suspend its sudden dissolution. In this opinion I received the countenance of the late president Dr. Samuel Bard, whom I requested to witness the case. I prepared a strong solution of the sulphate of zinc, about two drachms to an ounce of water, and administered it to the amount of a large teaspoonful every twenty minutes. This dose was repeated from four in the afternoon until about six o'clock. In the meanwhile the body of the child was several times immersed in a warm bath, made the more stimulating by the addition of a little rum and aqua ammoniæ; a blister was applied to its chest, and a stimulating

enema given. After about three hours the little sufferer seemed to revive, and exhibited less anxiety; its exertions in respiration, however, were shortly again no less painful; its voice croaking, and its face tumid. Finding no emetic action from the white vitriol, I substituted a solution of the sulphate of copper in the same proportion. The medicine was but twice repeated when a part of the membrane was detached and thrown up. I then again resorted to the white vitriol, and the child dislodged a large quantity of a similar membranous material. Within about twenty-four hours the situation of the child was wholly changed; its breathing became gradually more natural, and we considered it as rescued by the vitriols. By stimulating liniments and bland nutritious aliment the patient was completely restored.

CASE II.

In this second case the membranous stage had formed in a male child about three years old. According to the mother's account, the patient had suffered several days from the effects of cold upon the trachea and lungs. The ordinary means of relief had accomplished their wonted results; but the child was permitted, as previously, to be exposed to the vicissitudes of the winter weather. It was ten o'clock on an evening in January 1822, that I was first requested to see it. The parents stated that for nearly two days it had suffered in this attack, and that its symptoms had within a few hours become greatly aggravated. I found it to have the wheezing, hoarse sound of croup in respiration, little fever, and to be seemingly much exhausted. It frequently started from its recumbent posture to relieve its oppression, and its carotid arteries throbbed with much violence. I recommended a stimulating enema, and the warm bath. The friends of the child solicited that it might not be bled, as it was too much prostrated. I nevertheless urged the propriety of taking two or three ounces of blood from the arm. A blister was applied to the throat, a stimulating embrocation to the chest, and an active mercurial cathartic administered.

Three hours after my first visit I received a message no longer to attend the patient, as all hopes of recovery had been abandoned, and the parents were reconciled to their unfortunate lot. I however again called to see the child between the hours of one and two at night, and gave it the usual combination of tartar emetic and ipecacuanha, but without any effect. At this advanced period of the disease its breathing became still more alarming, its countenance ghastly, and its convulsive respiration threatened immediate dissolution. With much persuasion its parents yielded to the request that one more effort might be made to rescue it. A solution of the white vitriol was had recourse to, composed of a drachm of the sulphate of zinc to an ounce of water: three large teaspoonsful were given at intervals of ten minutes. After waiting about twenty minutes from the time the last dose was taken, the efforts of vomiting were renewed, a large portion of membranous matter was thrown off, and I considered the child as perfectly secure in the morning.

Two days after the child was playing in the room, and I discontinued my attendance.

CASE III.

Under such circumstances as must always accompany the membranous stage of hives, the vitriolic solution was also given in the third case. The patient was about twenty months old, and had laboured for several hours under the spasmodic breathing, attendant upon the last stage of cynanche trachealis. Calomel, in repeated and large doses, and the antimonial solution, had been freely administered, and blisters and the warm bath employed, without any special salutary consequences. Coldness of the extremities, and the convulsive efforts at respiration, seemed sufficiently indicative of the approach of death. I had witnessed, several years before, the loss of a robust child under these circumstances, in the attempt to diminish the struggles of breathing, by blood-letting. The collapse was too sudden and too great to be counteracted by stimuli. The vitriolic solution was therefore urged, in this third case, with the more confidence, and I could attribute the

escape of the patient, alone to the salutary action of this prescription.

Dr. Hosack has given the leading facts of these three cases in his additional observations on Croup, contained in the second volume of his Medical Essays, just published.

Before concluding this paper it may be proper to observe, that the vitriolic emetics may be given with more safety, and to a greater extent than is generally supposed. I wish to except from this remark, that condition of the patient which arises from inflammation, and a consequent spasmodic action of the larynx. I dare not say that in such a state they can be confidently recommended. In the membranous state of cynanche trachealis, I believe they will often prove the salvation of the sufferer, when all other of our approved remedies fail. I have repeatedly seen too much timidity in prescribers with this article of the materia medica, in different diseases in which it was strongly indicated. In a case of poisoning by laudanum, in addition to the ordinary measures of relief, I successfully administered the solution of the white vitriol, one drachm to half an ounce of water, in divided doses, at intervals of ten minutes, to an infant of six months old, to whom the nurse had given the thebaic tincture instead of the paregoric elixir. In several instances of adult subjects, where laudanum had been intentionally taken with purposes of self-destruction, I have found the white vitriolic solution, to the extent of half an ounce of the zinc, in divided portions, taken within forty minutes, fulfil the indications.

In another instance, where three ounces of the alcoholic tincture of opium had been taken and had been retained two hours, with great exertion I poured down, within an hour, one ounce of the sulphate of zinc in a pint solution, in three equally divided portions. The patient was allowed the free use of water during its action, and recovered without any detriment, either to his general health or digestive organs.

ART. VIII. CASE *of* WOUNDED NERVE, *cured by freely dividing it.* By T. NELSON, M.D. of Hyde-Park, New-York.

MISS N—— W——, some time in April last, being a little indisposed, was induced to be bled. The physician who was called, for some reason not very obvious, (as both the median cephalic and basilic veins were well situated for bleeding,) opened one of the subcutaneous veins on the external part of the fore-arm, just below the elbow. At the moment the orifice was made, the patient felt a very acute pain; she had frequently been bled, but at no previous time did she experience pain equal to this. The arm continued painful, accompanied with an inability to elevate it; at length becoming alarmed, she applied to the person who bled her for relief: he directed her to apply a wash, and bandage the arm lightly from the hand to the shoulder. This treatment was continued twelve or fourteen days without any benefit, but rather an aggravation of the symptoms, as the arm began to swell immediately after the application of the bandage, and the pain also much increased. The patient becoming more alarmed, applied to another physician, who employed frictions of vol. linament and laudanum; this course was continued some time without any benefit; the pain still increased, although the tumefaction diminished; there would, however, be intervals of almost perfect absence of pain, these were generally in the forepart of the day. The paroxysms of pain becoming more violent, a large blister was applied to the arm and shoulder; this gave some relief during the time it was drawing; but as the action of the blister subsided, the pain returned with increased severity. This treatment producing no permanent relief, cold affusion, or showering the arm with cold water, was next resorted to, and continued till about the first of August, but with no better success than the former remedies. About the 20th July I first saw the patient. At this time the arm had a perfectly natural appearance; no tumefaction or discoloration was present, except a small spot where the

orifice was made. As there did not exist a doubt in my mind respecting the nature of the affection, I recommended dividing the nerve, as the only probable prospect of obtaining permanent relief. The patient was quite averse to any thing of this kind; she concluded to continue the showering and consult her attending physician, and others, respecting the propriety of an operation.

August 3d. The patient came and took board near us, determined to have something done: her sufferings were now more severe than at any other former period. In the forepart of the day, she would be comparatively comfortable, but about 4 o'clock, P. M. the pain would begin to increase, commencing at the place of the puncture, and following the course of the nerves to their origin in the spinal marrow; becoming more and more severe, it would pass over to the corresponding nerves of the opposite arm, accompanied with spasmodic action of the muscles and tendons of both arms; the patient, during these paroxysms, suffered the most excruciating agonies; the pain proceeding to the stomach, produced the most distressing sensations, approaching nearly to syncope; no position or remedies, afforded any relief. Frictions of tinct. opii, warm fomentations, &c. &c., were employed; and tinct. opii given internally to the extent of four hundred drops in three hours, but were unavailing. The pain would continue till 3 or 4 o'clock in the morning, then abating, leave the patient extremely fatigued and exhausted. Her general health became much impaired, and the stomach and digestive organs so much deranged, that it was necessary to put her on the use of tonics, as wine, Huxham's tincture of bark, &c.

August 6. The sufferings of the patient having been so extremely severe for the three past nights, she felt willing to submit to any thing that afforded a prospect of cure. Dr. J. M. Pendleton (who was at that time in the neighbourhood) was consulted; he fully concurred with us in the opinion we had expressed respecting the treatment proper to be pursued. Accordingly, with a common scalpel, a free transverse incision was made, one quarter of an inch above the puncture.

about two inches in length down to the fascia of the muscles, to secure the division of the wounded nerve.

The *extreme pain* at the moment of the incision, together with a *numbness* of the lower part of the fore-arm, convinced us that the nerve was divided.

The lips of the wound were separated, and the wound filled with lint, to prevent union by the first intention. The arm continued painful after the operation, but much less than before; in the forenoon it would, at times, be entirely free from pain, but at the accustomed hour in the afternoon, the pain would return, perhaps in some degree influenced by habit, as the patient had now been afflicted with these paroxysms of pain for four months. The pain became daily less severe with some variation.

August 30. Arm perfectly free from pain; wound filled with granulations and cicatrized; a little stiffness and weakness remained in the arm, which gradually wore off by exercise, as the patient's general health improved.

The facts stated in the above case, afford conclusive evidence of the inadequateness of medicines to the cure of wounded nerve, and point to an immediate and free division of the nerve affected, as the only prospect of effecting a speedy and permanent cure.

ART. IX. A CASE of HÆMOPTYSIS, *alternating with a Discharge of blood from the Uterus.* By JOHN W. GLONINGER, M. D. of Lebanon, Penn.

ON the 11th Jan. 1824, I was requested to visit Catharine B—-, an unmarried female, aged about 26 years, of small stature and sanguineous temperament, who had a short time previously to my seeing her, been seized with hæmoptysis, of which she had within the last five months, three attacks. Having in her former attacks, succeeded in arresting the hemorrhage by the use of muriate of soda, which had been recommended to

her by the physician that then attended her, she was induced, before my arrival at the place of her residence, to resort to it in this, and had taken several doses, which however proved ineffectual.

As the hemorrhage was profuse, her pulse full, strong and rather tense, and as her habit was plethoric, I abstracted about sixteen ounces of blood, and prescribed every two hours a pill composed of two grains of acetas plumbi and one half grain of opium, which, together with the epispastic I applied to the chest, entirely checked the effusion of blood from the lungs in a few hours, but soon after a vicarious discharge of blood took place from the uterus; this during my absence, having been called to another patient, became alarmingly profuse, and I was in haste sent for. Upon my arrival, finding her strength much exhausted, her pulse small, weak, and intermitting, her breathing somewhat difficult, and her extremities cold; I directed a continuance of the pills, applied a jug of warm water to the feet, and immediately had recourse to the *tampon;* a mean in uterine hemorrhage unfortunately too much neglected by some practitioners from a groundless supposition of its occasioning concealed hemorrhage.

It may not be considered as irrelevant, or out of place, here to remark, that she always had been regularly visited by the catamenial secretion: she had a visitation of it ten days prior to her present indisposition, and never had been subject to hemorrhoids; consequently the pulmonary hemorrhage could not have been, in this case, occasioned by a suppression of the menstrual or hemorrhoidal discharge.

The following morning I was informed that the uterine hemorrhagy had ceased, that during the night the tampon was removed, and that soon after the hæmoptoe returned, but had subsided after taking a few of the pills of acetate of lead. In order to obviate any ill effect that might arise from the use of saccharum saturni, I now ordered some oleum ricini. Since then, she has had no discharge of blood, and now enjoys her wonted health.

Art. X. Observations *on the* Varioloid Disease. By J. Smyth Rogers, M. D. of New-York.

To the Editors of the New-York Medical and Physical Journal.

New-York, March 16th, 1824.

Gentlemen,

As the questions which are in agitation, relative to the epidemic now prevalent among us, involve matters of incalculable interest to our fellow-beings, it becomes the solemn duty of every physician to lend his assistance in eliciting such facts as shall exhibit the value of Dr. Jenner's discovery in its true light. Should it appear that vaccination is capable of disarming small-pox of its virulence, or of controlling its power, it is of the highest importance that every one should be induced to improve the opportunity of enjoying so great a blessing; but if it prove *unworthy* the confidence hitherto reposed in it, it is equally important that our fellow-citizens should be guarded against the fatal consequences of trusting to that which "has no power to save." I am aware that these subjects are in a train of investigation, under the auspices of two of our most respectable medical associations; but as circumstances render it uncertain how long a time may elapse before we are in possession of the result of their inquiries, and as, in the interim, the enemies of vaccination are striving to shake the public confidence in the antivariolous powers of kine-pock inoculation, it appears desirable, that any striking occurrences which tend to show that there is no reason for a diminished trust in that operation, should be made known. I have, therefore, made a brief sketch of a few of the most interesting cases which have presented themselves to me within the last three months: should they appear to you sufficiently important to be made public, I shall be obliged by their insertion in your valuable Journal. Before noticing these, however, I must beg leave to give the minutes of some cases which have been repeatedly referred to, as cases of *small-pox after vaccination:* with what propriety they are so called, will appear from the course of symptoms which I have given in detail, as noted down from

the mouths of the parents. It may be proper to state that these patients were not under my care: my inquiries into the particulars of their cases, were made, in consequence of an invitation given by a gentleman, at a late meeting of the County Medical Society, to all persons interested in the subject of vaccination, "to call and examine for themselves."

I am, gentlemen,

Your obedient serv't.

J. SMYTH ROGERS.

Drs. Francis and Beck.

On Friday 5th of February, Ann H—, aged 5 years, was attacked by febrile symptoms, with pain in the back, limbs, and head, sore throat, &c. *She had never been protected, either by inoculation or vaccination.* On Tuesday 10th, a pretty extensive papular eruption appeared about the face, limbs, and body, followed by an alleviation of her pains; the eruption advanced gradually to maturation; showed some tendency to pit on the 9th day, and on the 12th, began to dry; crusts were formed, which falling off, left numerous little pits, or depressions in the skin.

On the 15th of February, Lucretia H—, aged 9 years, and on the 16th, Frances, aged 11, began to complain of symptoms similar to those of Ann. These children were both vaccinated in infancy. Lucretia has a distinct scar on the arm; that of Frances is not so deeply marked. They both had considerable fever; pain in the back, head, &c. On the 3d day a scattered papular eruption appeared on the face, arms, and back of Frances; it continued apparent for four days, and *then receded*, leaving no mark to designate the place it had occupied. In Lucretia, a papular eruption appeared on the 4th day; it gradually filled with a *watery fluid;* the vesicles *burst on the 3d or 4th day*, (the mother does not distinctly recollect which,) discharged their contents, and dried, leaving behind them red marks, but without any elevation of the surface. These marks have now (March 16th) entirely disappeared.

On the 22d of February, 16 days after the first child's attack, and the 12th day after the appearance of her eruption, the eldest sister, Mary Ann, aged 19, began to complain: on the 3d day an eruption appeared; the papulæ, though scattered, were pretty numerous on the face and arms, few only appearing on the body; the eruption became pustular, and on the 9th day began to change; there are *no depressions* to be found where the pustules appeared, but there were in their place *tubercular elevations* of a reddish hue; these tubercles are now (16th March, 20th day) gradually disappearing. This patient was vaccinated in infancy, and bears a regular scar upon her arm.

On the morning of the 24th February, Margaretta, aged 13, became unwell, and on the afternoon of the same day, Elizabeth, a twin sister, also began to complain. In these cases, vaccination was performed in infancy: Elizabeth has two scars on her arm, Margaretta only one. Margaretta's eruption appeared on the 3d day, became pustulous, and began to dry on the 7th; Elizabeth's also appeared on the 3d day, suppurated and began to dry on the 6th. No pits are left by the pustules, but *tubercular elevations*, similar to those of the elder sister, were remaining on the 12th day of the eruption. They are now (March 16th) gradually disappearing.

The next child who sickened, was Gabriel, aged 7 years: *attempts* had been made to vaccinate him, but the mother states that *they had not been effectual*, and that his physician had declared it necessary to re-vaccinate; this however was not done, and there is no mark to be discovered on the arm. This child became indisposed on the 25th of February; on the second night he was delirious, and continued so at intervals for two days; on the 5th day an eruption appeared, previous to which he was threatened with convulsions. The eruption was very general; it began to dry on the 10th day, but the change was scarcely perceptible until the 11th day; his face on the 14th day was nearly covered with a crust; where this had fallen off, there were discoverable numerous little pits or depressions in

the skin. The pits are now (March 16th) very distinct: he will bear decided marks of the disease.

William, the eldest son, aged 16, and Ellen, the second daughter, aged 17, sickened the same evening with the preceding: they were both vaccinated in infancy and bear marks on their arms. The eruption made its appearance on the 3d day and began to decline, in Ellen's case, on the 6th, and in William's on the 8th day, leaving the same *tubercular elevations* which were noticed in some of the preceding cases; but no pits. These patients were both severely sick, the boy more so than his sister, his eruption being very copious.

The tenth and last case was that of Emily, the youngest child, aged two and a half years. Her febrile attack commenced on the 27th of February; on the 29th the mother noticed a general efflorescence, and on the 1st of March the eruption appeared, gradually filled, suppurated, and began to decline on the 8th day: it left the face covered with a crust. The crust has now (March 16th) fallen off, and there are numerous little depressions, both on the face and arms, marking the situation of the pustules; these however will not leave permanent marks.

These patients have all occupied the same chamber during their sickness, and at one period of their indisposition, the ten children slept together in the room, their mother who nursed them, being a co-occupant with them. She stated that she had found them to complain of chilliness when the air was admitted; she therefore kept them warm through the course of their disorder. Indeed, at my first call, I found the heat of the room oppressive: it was occasioned by a close stove, and near this two of the children were lying, on soft beds, covered by one or more blankets. These patients have all gone through chicken-pox and meazles, except the youngest child Emily, who has never had the latter disease. This child was just recovering from *varicella*, when Ann was attacked with the disease which has gone through the family.

With regard to the peculiar fætor, which is considered by some as characteristic of small-pox, I would remark, that the

mother found it so oppressive in the case of the youngest boy, Gabriel, as to render her temporarily sick. I found it at my first visit very evident in the case of both this boy and the youngest child, who were then for the most part confined to their beds. The other unprotected child, Ann, I did not see until she had been long convalescent.

The preceding account, as I have already remarked, was noted down from the mouths of the parents; it has since been carefully read over to the mother, the father being absent, and by her acknowledged to be correct.

I would now make a few very brief remarks on the above report.

In the first place then, the cases of Ann, Gabriel, and Emily are, unquestionably, not adducible as instances of *small-pox after vaccination*, as no effort had ever been used to protect the two youngest in any manner from variola; and the third, though attempts had been made to vaccinate, was pronounced not secured by the physician who attended him.

Secondly, the cases of Frances and Lucretia will scarcely be brought forward as *small-pox;* the first having only a papular eruption, which receded after the 4th day, leaving no trace of its previous existence; and the second having a vesicular disease, which discharged itself on the 3d or 4th day, leaving for a short time red spots on the skin, which eventually disappeared entirely.

With respect to the cases of the remaining five children, viz. Mary Ann, Margaretta, Elizabeth, William, and Ellen, there is more room for discussion; but *even these*, if fairly viewed, will hardly be called *genuine small-pox*, by those who are most doubtful of the benefit of vaccination. The eruption, in the cases of Elizabeth and Ellen, began to change on the 6th day; in that of Margaretta on the 7th; in that of William on the 8th; and in that of Mary Ann on the 9th day. In small-pox the pustules are *not at their height* until the 11th day. In small-pox, crusts are formed, which begin to fall off about the 14th or 15th day, and leave, in milder forms of the disease, *red spots* on the skin, which after some time disappear;

in more severe instances, permanent *pits* or *depressions*. In these cases, the eruption, on its recession, left *tubercular elevations* of the surface, which gradually contracted in size, and finally disappeared.

Other marks of distinction between the disease of these patients and the small-pox as it occurs in unvaccinated persons, might be pointed out: the above, however, are sufficient for my purpose, which was, to show that some of the cases which are brought forward as evidences of the inutility of the kine-pock, fail in establishing the point for which they are adduced: proof is wanting that they *are* small-pox. If the same examination into the other reputed instances of the failure of vaccination were instituted, I have no doubt it would be attended with a similar result. My remaining cases tend to prove the affirmative of the question, Is vaccination a preventive of small-pox?

In the early part of January I was called by Mrs. K. a respectable widow, to visit her son, who had been sick six days. I found him labouring under small-pox: it was the second day of the eruption; the pustules were numerous, but distinct, and the disease not very severe; the eruption went through its regular course, and the patient recovered, bearing but few marks of the disorder. At the time of my first visit I found four younger children in the room with her, two of whom occasionally slept on his bed. Neither of these children had been protected, I therefore immediately vaccinated them. By further inquiry I ascertained that there were three other children in the same house, who were in the habit of passing a considerable portion of every day in the room with the sick boy: these, I was from particular circumstances unable to vaccinate until the second day after the others. About a fortnight after the appearance of the small-pox eruption in the boy, one of the two younger children whom I had vaccinated, was attacked with febrile symptoms, followed by an eruption of papulæ, which gradually suppurated and dried away, leaving *tubercular elevations* to mark their situation. The pustules in this case were between forty and fifty in

number. About twenty-four hours after this child was attacked, the two eldest of the four began to complain; they were affected with pain in the head and back, nausea, &c. but their fever was not severe. About the fourth day an eruption, similar to that of the preceding patient, appeared; in the one case the pustules amounted to about fifty, in the other they did not exceed a dozen. Soon after these children sickened, the eldest sister, who was engaged in nursing them, and who had been vaccinated 16 years previously, had an eruption of *three* pustules, precisely like those of the other patients; and the second sister, who was vaccinated seven years before, had a similar eruption of *six* or *seven* pustules: in the first of these instances there was no preceding sickness; in the second there was nausea, foulness of tongue, and a slight head-ache, which was removed by an emetic. The youngest of the children vaccinated after the boy's variolous eruption, although constantly on the bed with her sick brother, was free from all indisposition.

Of the three children vaccinated in the adjoining chamber, one had a small attack of fever, with pain in the head, &c. about three weeks after the case of small-pox; the febrile symptoms subsided about the fourth day, but *no eruption appeared*. The second child was attacked at the same time, though less severely, with fever; about the third evening an *efflorescence* was visible on the face, limbs, and part of the body; it receded in the course of the night, and the child recovered. The third patient was not at all unwell.

On the 1st February, three weeks after my visit to the first sick child, I was called to J. M. a relative of the family, who became a boarder with them, during the sickness of some of the children. I found him labouring under fever, sore throat, pain in back, limbs, &c.; about the fourth day an eruption showed itself; it suppurated, and drying away, left the same *elevations* on the skin, which had been noticed in several preceding cases. This patient had a pretty general eruption, but his indisposition was not such as to confine him to his bed after the first day.

A few days previous to visiting this patient, I was called to Messrs. J—, L—, and K—, three gentlemen who resided together, and who had been exposed at the same time to a varioloid disease, and subsequently to confluent small-pox. They were all simultaneously affected with the symptoms which precede the eruptive disease we are noticing: on the fourth day a minute papulous eruption showed itself on the face and breast of Mr. K—, and was followed by an alleviation of his fever; very few of the papulæ suppurated; on the seventh or eighth day they receded. The fever of the other two patients abated about the same time with that of the preceding case, but no eruption could be discerned. From these patients I learned that several of their fellow-boarders had been exposed, in common with them, to a case of eruptive disease, occurring in a protected person; all of them save *two*, had been previously vaccinated; of these two, one was *unprotected;* the other had been protected, but could not say decidedly, whether by kine-pock or small-pox. Four of these gentlemen were not in any degree unwell: the one who was *unprotected* was seized by small-pox, which became confluent and proved fatal; while the others had an eruption attended by symptoms more or less severe, in some however so slight as scarcely to be regarded. The only additional cases I shall offer, are the two following:

Ann H———, aged 24, was vaccinated at the dispensary in the early part of February. A fortnight after her vaccination she was exposed to small-pox: she was attacked about fourteen days after this exposure with fever, head-ache, &c. which terminated in a moderate papular eruption; her symptoms were not severe, although she confined herself to the bed for three or four days; the eruption suppurated as in the preceding cases: some circumstances prevented my seeing her after she became convalescent, so that I am unable to state the appearance of the marks left by the pustules.

Resident in the same house with this woman was a child aged 10 months: she was also vaccinated at the dispensary, and on the 8th day after the vaccination was exposed at the same time with Ann H——, to the case of small-pox. She was

seized with fever within a few hours of Ann's indisposition; a vesicular eruption appeared, *somewhat resembling* the chicken-pox; the vesicles burst, and their situation was designated by red marks, which remained visible for several days.

The inferences I would draw from the preceding cases, taken in connexion with several others of a similar character which have come under my notice; and with the reports given us of the analogous disease which has appeared in Europe at different times, and has been especially noticed in the years 1818–19 et seq. are these :—

1. That vaccination is, in a large proportion of cases, a *perfect* protection against the small-pox.

2. That where the kine-pock does not *entirely* overcome the variolous contagion, it so far modifies and controls it, that it is only capable of producing a comparatively mild disease, of shorter duration than genuine small-pox, and very rarely proving fatal. Of the cases which have presented themselves to my observation, there has not been one that I have considered alarming.

3. From the reports of the disease as occurring in Great Britain some years since, it would appear, that the kine-pock has the advantage over the small-pox, of rendering the secondary attacks, when they occur, milder in vaccinated than in inoculated persons. So far as my experience goes, it is in accordance with these views : I have, however, only seen two or three cases, in which small-pox occurred after small-pox. In one of these, the disease assumed the coherent form; in another, it was decidedly confluent, and as severe a case as I have ever witnessed : in this last instance the patient not only remembered the fact of small-pox inoculation, but bore a very regular and distinct scar on her arm.

4. That the disease now prevalent among persons who are protected, is small-pox, modified by previous vaccination or inoculation.

5. That the varioloid, or modified disease, is capable of producing genuine small-pox in the unprotected. This appears from the cases which are recorded in the European periodical

works, and coincides with my experience in the present epidemic. This fact would show the impropriety of the attempts which have been made to introduce the varioloid inoculation. Had some of the gentlemen, who have thus been creating centres from which the small-pox in all its horrors is extended to the unprotected, and who have no doubt been influenced by the hope of arresting, or of rendering still milder the modified disease, consulted the records of former times, they would have found satisfactory evidence of the fact, that inoculation with the matter of the varioloid, is capable, like that of variola, of producing all the forms of disease, from the mildest eruption in protected persons, to the most virulent confluent small-pox.

REVIEW.

ART. I. A TREATISE *of the* MATERIA MEDICA *and* THERAPEUTICS. By JOHN EBERLE, M. D. Editor of the American Medical Recorder, &c. Two vols. pp. 978. Philadelphia. 1822.

IT is with much pleasure we find ourselves called upon at this early period to present our readers with the review of a second treatise on the Materia Medica by an American author. Nothing, in our opinion, could furnish stronger evidence of the increasing ardour with which the science of medicine is cultivated by the physicians of this country. And when we consider that but a few years have elapsed since we were indebted to foreign aid for even the rudiments of professional education, we cannot fail to be gratified with the striking and favourable change which has taken place within this short period. We are now supplied, by the labours of our own physicians, with elementary books on every branch of science connected with our profession; and we have no reason to regret any deficiency of learning, or of talent, in our native substitutes. On the Materia Medica, more especially, there has been exerted a degree of industry in the accumulation of original observations on the virtues of medicines in their several applications to disease, which has secured to our productions the highest respect and attention from abroad. Dr. Eberle, in pursuing the steps of his predecessors, has rendered his treatise a valuable depository of all the important facts which have come to the knowledge of the present time; and he has distinguished his compilation no less by his judgment than by his learning. In one respect, more particularly,

do we think Dr. Eberle's book a safe and valuable guide to the students of this branch of science: we refer to the view our author takes of the modus operandi of medicines. It is well known that on this subject the medical world has long been divided: some regarding the solids alone as subject to the action of medicines, while others again regard the fluids as principally affected: discarding all exclusive theories upon the subject, a third class combine the views of both, and consider the fluids no less than the solids as susceptible of impressions from medicinal agents. In this number we are happy to class Dr. Eberle; and more especially, as no ingenuity has been spared in the most popular works published in this country, to inculcate doctrines exclusively favouring the views of the solidists.

Before entering upon the proofs of the admission of remediate substances into the circulation, Dr. Eberle makes some pertinent remarks on the general failure which has attended the attempts to discover in the blood substances subjected to the action of the absorbents, and afterwards discovered in the secretions. In an experiment made by Dr. Wollaston, three and a half grains of the prussiate of potass were administered to a person, and repeated thrice at equal intervals for three hours. The urine was found to afford a deep blue at the end of four hours, but no precipitate could be detected in the serum of the blood. This experiment, as is observed by our author, is fallacious in the extreme; because but a small portion of the whole quantity given could have entered the lacteals, and even this must have been so gradually introduced into the circulation, and so immediately again secerned thence by the kidneys, that it is obvious the most minute quantity indeed, at any particular time, could have been present in the blood. Again the very small quantity present must have been diffused through a mass of at least twenty-four pints of fluid. But it appears from the experiments of Professor Macneven that no less than an eighth of a grain to two ounces of serum is requisite to render it capable of detection by the most delicate

tests.* No less than ten grains, therefore, must be present in the mass of the circulating fluid before it could be detected. It is scarcely necessary to suggest that in the urine, on the other hand, an equal quantity, gradually accumulated, will become very perceptible; the quantity of urine not only being incomparably smaller, but the substance being much more easy by far of detection in this fluid. Dr. Eberle says he has discovered one-sixteenth of a grain of the prussiate in an ounce of urine.

We must not omit observing likewise that the substances generally used in experiments of this nature are very prone to run off by the kidneys, and thus escape the course of the circulation before they can be submitted to the means of detection. Hence they accumulate in this fluid, where they must necessarily be in a less diluted state than when in the blood. From this too we learn how it happens that substances which may be detected in the thoracic duct, or the abdominal veins, are lost sight of when they reach the general mass of the blood.

The author now proceeds to notice the testimony in favour of the admission of foreign substances into the circulation. Not to repeat experiments which have been alluded to before in this Journal, we shall confine ourselves to those which have not been by us recorded.

Those instituted by Drs. Lawrance and Coates of Philadelphia, are full of interest; and as they have not been noticed by our author to the extent they deserve, we shall briefly state their results. In order to determine the relative absorbing powers of the veins and lymphatics, different substances, principally prussiate of potass and sulphate of iron, were subjected to their action through various channels, such as the alimentary canal, under differing circumstances, the trachea and lungs, the abdominal cavity during life, and the cellular substance. "The general weight of evidence in these cases is strongly in favour of the principal absorption having

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* New-York Med. and Phys. Journal, No. 2.

taken place through the vena portarum." With this result we have not now any immediate concern; but from all the experiments, however affecting the question at issue between the veins and lymphatics, it resulted that the substance introduced, whether by the one system of vessels or the other, was successively detected in the heart and arteries. Thus, where the vena portarum was secured by ligature, the prussiate of potass, introduced through a wound in the upper end of the duodenum, was detected in the heart in one case in thirty-four, in a second in thirty-nine, and a third in thirty-five minutes. Again, where the lymphatic outlets were secured, and the prussiate must have entered the circulation by the branches of the vena portarum, it was detected in the right side of the heart in thirty-two minutes. Thirdly, the lymphatic system being secured, and the vena portæ likewise, injections of prussiate of potass were made down the œsophagus, and in this case the prussiate was likewise carried into the circulation. Hence the experimentalists justly observe, "We conceive we have thus established that articles taken into the stomach may escape by three outlets for absorption; namely, the vena portæ, the œsophageal veins, and the thoracic duct; and if all these are closed, the absorbed matters are no longer conveyed to the circulation or to the urine."* These experiments establish beyond a peradventure the fact which has been so gratuitously and obstinately disputed, that foreign substances do enter the circulation, and that by various and extensive channels. The experiments also of Majendie, not noticed by our author, go to show that foreign substances do actually enter the circulation and produce their specific effect through the medium of the blood. This celebrated physiologist took a dog, and separated the leg from the body, except by the attachment of the crural artery and vein. He then forced into the cellular substance of the separated limb, two grains of a very subtle poison, (upas tienté.) The effects of

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* Philadelphia Journal of Medical and Physical Sciences, Vol. V. p. 337, 8.

the poison were as prompt and severe as if the thigh had not been separated from the body. The effects were manifested before the fourth minute, and the animal died before the tenth. The preceding experiment was repeated in a still more striking manner, by completely separating the leg from the body of the animal, and keeping up the vascular communication by quills introduced into the extremities of the divided artery and vein. The result in this case was the same as before, the poison introduced into the foot producing its effects in about four minutes. Our enterprising countrymen before referred to, have repeated these experiments of Majendie with confirmatory results. They employed the nux vomica, and succeeded, in one case without the quills, and in two with them, in producing tetanus and death.

In his classification of the articles of the materia medica, Dr. Eberle adopts, as the basis of his arrangement, the one lately proposed by Dr. Granville of London. The primary divisions are founded on the specific tendency of medicines to act upon particular organs, or systems, and under these are distributed the ordinary divisions of *tonics*, *&c.*

The first general division of this system, consists of "medicines that act specifically on the intestinal canal, or upon morbific matter lodged in it."

Under this are arranged, *Emetics*, *Cathartics*, *Anthelmintics*, and *Antacids*.

The second consists of "medicines whose action is principally directed to the muscular system."

This includes *Tonics* and *Astringents*.

The third embraces "medicines that act specifically on the Uterine system."

Under this are placed *Emmenagogues* and *Abortiva*.

The fourth is "medicines whose action is principally directed upon the Nervous system."

Under this are arranged *Narcotics* and *Antispasmodics*.

The fifth class is "medicines whose action is principally manifested in the Circulatory system."

Stimulants are placed under this class.

The seventh, is "medicines acting specifically upon the organs of secretion."

The subdivisions of this class are *Diaphoretics*, *Epispastics*, *Errhines*, *Emollients*, *Diuretics*, *Antilithics*, and *Sialagogues*.

The eighth, is "medicines that act specifically upon the respiratory organs."

Under this are placed *Expectorants* and *Inhalations*.

The ninth, is "medicines whose action is purely topical."

Escharotics constitute the only subdivision of this class.

This classification possesses undoubted advantages, but is not characterized by that simplicity which so eminently distinguishes the one adopted by Murray. This last is not, we confess, altogether free from objections, but on comparison, we think it will be found the least obnoxious to criticism of any system extant. We shall not, however, dwell on this subject but proceed to consider the first class of medicines, of which our author treats.

Emetics.—Dr. Eberle commences this chapter with some observations on the mechanism of vomiting, and the modus operandi of emetics on the living system. In the discussion of this latter subject, we find some remarks on the influence which emetics exert in reducing accumulated fluids.

Effused fluids, it is well known, are frequently diminished with remarkable rapidity during the operation of emetics. In order to account for this fact, various explanations have been offered. According to Dr. Chapman, there exists an antagonising power between the absorbents and the blood-vessels, by virtue of which the activity of the one set of vessels is indirectly increased by the reduction of action in the other. Thus in the case of emetics, the sanguiferous system being in a state of reduced action, the absorbents acquire a proportionate degree of increased action, and are thus enabled to remove the effused fluids with increased rapidity. Dr. Eberle, however, thinks that this phenomenon admits of a more satisfactory and philosophical explanation.

"When an effused fluid accumulates in the body, it must be owing either to too rapid an exhalation from the arteries or too slow an absorption by

the lymphatics. Whichsoever be the case, it is quite certain that if we lessen the action of the exhalent vessels the quantity of the effused fluid must diminish, although the action of the absorbents remain unaltered. It is in this way, therefore, I presume that emetics act when they diminish dropsical accumulations." Vol. I. p. 24.

We are afraid that the maxim of the poet, "in vitium ducit culpæ fuga," has been in the present instance verified by our author. His explanation entirely overlooks the very circumstances which, as it appears to us, was to be explained, namely, the *rapidity* of the removal of the accumulated fluids by the indirect agency of emetics. Now as he admits that a slow absorption is no less a cause of their accumulation than increased exhalation, we do not see how, in the former case at least, a *rapid* absorption shall take place, and yet the action of the absorbents, already too slow, remain unaltered. Besides, as we shall presently see, the view which Dr. Eberle himself, takes of the action of cathartics, tends no little to substantiate the explanation which in this instance he attempts to refute. For emetics not only reduce the action of the heart and arteries through their depressing influence on the brain, but by the evacuation of fluids from the stomach, &c. act in the same manner as cathartics in lessening the quantity of serum in the blood, and thereby indirectly stimulating the absorbents to increased action.

Dr. Eberle next proceeds to notice the extensive application of these remedies in various and important diseases. In typhus and typhus pneumonica they are recommended as frequently arresting the progress of the disorder in the most prompt manner; and in the latter affection, more especially, they are represented as being advantageous in every stage of the disease, promoting expectoration, and restoring the equilibrium of the circulation. Our author thus speaks of their use in *malignant fever:*

"Emetics have also been recommended in the various forms of malignant fever. In the beginning of some fevers of this character, they may occasionally prove beneficial, though, as a general rule of practice, their employment is to be regarded of doubtful efficacy, even in the earlier

stages of such fevers; and in the advanced period for the most part injurious." Vol. I. p. 27.

What the several forms of fever are, here referred to under the title of *malignant*, does not appear very clearly. If yellow fever be one, and we doubt it not, we could have wished that the author had been more positive in his denunciation of this class of medicines in this affection.

In cynanche laryngea, which is undoubtedly the most fatal variety of anginose disease, emetics were at one time recommended by Dr. Armstrong, as one of the most effectual means in our power for arresting the progress of the disease. Dr. Eberle accordingly quotes the statement of Dr. A. to show the successful exhibition of these medicines in five cases of this disease. We regret that on a subject of so great importance Dr. Eberle had not stated, that the subsequent and more enlarged experience of this author induced him to consider emetics as adjuvants only, and not as principal remedies, as they would appear to be from the imperfect and incomplete statement here presented to us. To venesection, the most copious and often repeated, the first rank in the list of antagonists to this dreadful affection is undoubtedly due. Without this powerful means of derivation, all other remedies have proved, in by far the majority of recorded cases, wholly inefficient; preceded by it, however, they are powerful, nay frequently, indispensable auxiliaries.

Our author's reasons for administering emetics in hemorrhages from the uterus, deserve consideration.

"Independently of very respectable testimony in favour of the use of emetics in this variety of hemorrhage, we have a good anatomical reason both for the advantages of vomits in menorrhagia, and for their occasional injurious effects in hemoptysis. During the act of vomiting, the abdominal muscles and diaphragm are thrown into a state of violent contraction. The natural consequence of this is a degree of pressure on the abdominal aorta, both where it passes through the crura of the diaphragm, by the contraction of this muscle, and in its course through the abdomen by being compressed in common with the other contents of this cavity. Hence there will be a slight impediment to the passage of the blood to the lower portions of the body, whilst it will be more forcibly driven into the vessels which pass off from the aorta within the thorax. The reason is therefore

obvious, why vomiting will sometimes not only increase, but give rise to a hemorrhage from the lungs; whilst on the contrary its effects in menorrhagia, so far as experience has taught us, are not only free from dangerous consequences, but very often of unquestionable service."

Cathartics.—In this chapter our author has embodied a mass of practical information that must be highly satisfactory to students more especially, and far from being unworthy the attention of the more advanced members of the profession. It is impossible for us to follow him through his numerous observations on this important class of medicines; we must content ourselves with noticing the following general remarks on the effects produced by cathartics on the animal economy, independently of the more immediate operation of evacuating the contents of the bowels.

1. They diminish the action of the heart and arteries, and are therefore valuable agents in reducing the system when under the influence of the sthenic diathesis, or attacked by phlogistic diseases. They produce this effect by the abstraction of a large quantity of serous fluids from the exhalent vessels on the surface of the intestines, and thereby diminishing the mass of the circulating fluids.

2. They promote the absorption of fluids from the internal cavities. Diminishing the quantity of serum in the blood-vessels and lowering their tone, they excite, by a law already referred to, an increased action in the absorbent system, by which morbid accumulations in any of the cavities of the body are removed. Dr. Eberle accounts by means of this principle, for the fact noticed by authors on the materia medica, that cathartics frequently increase the effects of diuretics. The author might have added venesection and emetics as frequently instrumental in the production of a similar effect.

3. Cathartics promote biliary secretion, and remove the atony that frequently pervades the portal circulation by "exciting a brisk peristaltic motion of the intestines, whereby the blood which is accumulated, and as it were, stagnated, in the portal circle, is propelled forwards." We quote with our author, the words of Dr. James Johnson, who we may take the

liberty of remarking by the way, has in various passages of his works, taken no little pains to assume to himself the credit of originality for the doctrine, that in the first stages of fever, &c. the blood is *stagnated* in the portal circle. Now without tracing this idea further back, we would refer Dr. Johnson to the admirable treatise of Senac, on Intermittents, in which that author states this doctrine in the most ample manner; and supports the rationale of his remedial operations by means of this very fact, which Dr. Johnson would seem, from his phraseology, to believe that he has been the first to suggest.

4. They produce a powerful derivation from the superior parts of the body, and hence they are so very beneficial in diseases of the head, &c.

Among the American articles treated of by our author, we notice the juglans cinerea, the podophyllum peltatum, and the cassia marilandica.

Tonics.—According to our author

"These are medicines which impart tone and vigour to the system without materially increasing either the heat of the body or the frequency of the pulse." Vol. I. p. 230.

This definition we deem objectionable in the latter clause. Were it true that neither the heat of the body nor the frequency of the pulse were increased by tonics, we would be at a loss to account for their injurious tendency in phlogistic diseases, or for the advantages derived from them in cases of an opposite nature. It does appear to us that the author must have intended to assert that these medicines do not as diffusible stimulants, *immediately* or *sensibly*, produce their effects, but gradually and slowly. This, indeed, appears from what the author himself states in the next page, and we should not have noticed the error if it had not occurred in a definition which should be not only free from palpable errors, but unexceptionably precise and correct in all its parts. Tonics act according to our author in three ways: 1st. by improving digestion, and thereby causing the more abundant and healthy formation of chyle; 2dly, by means of sympathy propagating

the action which they locally produce to other parts of the body; and 3dly, by being absorbed into the circulation, and thus acting directly on every organ of the system.

The section on *Cinchona* will be found replete with ample information on the analysis of this highly important article, on its several pharmaceutical preparations as fully detailed in the London Medical Intelligencer, and also on its applications to various forms of disease. In the latter particular we think our author extremely judicious in his opinions and a safe guide in the use of the cinchona. The next articles under this class are the aristolochia serpentaria and the prunus virginianus, both plants indigenous to this country. The following is the account which our author gives of the remediate agency of the latter article:

"When taken into the system, it produces a slight increase of the action of the heart and arteries, and induces, in some individuals, considerable drowsiness. When continued for some time, and not in very large doses, it gives tone to the stomach, and by this effect, vigour to the general system. When, however, it is taken in large quantities, and frequently repeated, it weakens the digestive organs, and produces an effect on the heart and arteries, the very reverse of a stimulant. In my own person I have several times reduced my pulse from seventy-five to fifty strokes in a minute, by copious draughts of the cold infusion taken several times during the day, and continued for twelve or fourteen days. This effect has not, I believe, been noticed before; but from much experience with it I am strongly inclined to believe that we may control the action of the heart and arteries to a considerable extent, by the use of this substance." Vol. I. p. 272.

Dr. Eberle proceeds to state that he employed this medicine in the cure of intermittents while he resided in the country, and in the majority of cases with success. It seemed to be most applicable to those cases which did not yield to the bark, and "in one instance in which bark, arsenic, and mercury had all been tried ineffectually, the patient was finally cured by the use of the wild-cherry bark infusion." Our author has also used it in hectic fever with unequivocal advantage. In this disease its beneficial effects are undoubtedly owing to the prussic acid which the wild cherry-tree bark contains. This acid is well known to lessen the irritability of the system,

and to be one of the most valuable palliatives we possess in phthisis. It removes the tension, irritability and frequency of the pulse, lessens the cough, and checks the nocturnal perspirations and the diarrhœa which attend this disease, and it thus indirectly sustains the strength of the system.

The cornus florida, the chironia angularis, the liriodendron tulipifera, are among the other American tonics which Dr. Eberle recommends as excellent substitutes and auxiliaries to the cinchona.

The remediate powers of *gold* in syphilis have for some years divided the opinions of practitioners in this country, and more especially in this city. Some of our most respectable physicians have doubted the efficacy of this article, having used it in the secondary forms of syphilis without effect. To this stands opposed the evidence of others no less entitled to consideration, who maintain that its efficacy is equal to that of the muriate of quicksilver, and with incomparably less inconvenience to the patient. Dr. E. has employed gold in two cases of secondary syphilitic ulcers of long standing, in one of which, although an amendment was evident, no cure was effected by this remedy: the other yielded entirely to the medicine. In both these cases mercury had been employed for a long time without effect. In a case of scrofulous ulceration he also gave it, and states that he succeeded in healing up the sores very promptly. The cure, however, was not permanent.

Emmenagogues.—Dr. Eberle believes with some very eminent physiologists, that the menstrual fluid is a secretion sui generis, and not a mere effusion of blood. For ourselves, we are free to confess that the facts and arguments hitherto advanced on this subject have by no means appeared satisfactory. Whatever may be the truth on this subject, it will not affect the belief now very generally entertained, that the articles usually termed emmenagogues do not possess any direct influence over this discharge. The contrary is still maintained, and reasoning from analogy, would lend it no little confirmation. Every organ in the body seems to enjoy a specific attrac-

tion for some one class of medicines in preference to others, and it is not unphilosophical to suppose that the uterus is entitled to the same privilege. Experience, however, has so far refused her assent to the supposition, and established the position beyond a doubt, that the articles usually supposed to be specific in their action on the womb are no more than relative agents. Else how could we reconcile the production of similar results from the most opposite and apparently contradictory means. Besides, their supposed emmenagogue action admits of explanation on other, and as it appears to us, conclusive grounds. We shall here borrow the language of our author, as his views coincide with our own.

"I have already said that it does not appear probable that any of the emmenagogues exert any direct action upon the uterus. If this were the case, we might, I think, calculate with much more certainty on the operation of these remedies, than experience teaches us to do. If we attend particularly to the effects of these articles, we discover that many of them have a decided tendency to increase the flow of blood to the pelvic viscera generally. This is also the case with some other means occasionally resorted to for the restoration of obstructed catamenia, and which cannot be properly placed under the head of emmenagogues. Thus ligatures on the thighs, the semicupium, and fomentations to the external parts of generation, can only act by exciting a local plethora in the vessels of the pelvic viscera, and consequently of the uterus. I have known the extirpation of large hemorrhoidal tumours to restore suppressed catamenia, by which the local drain of blood from these parts was removed, and the ordinary fulness of the uterine vessels re-established." Vol. I. p. 405.

This simple explanation shows conclusively that this class of medicines may and do operate without possessing a specific power over the womb. It must be borne in mind likewise, that even then, emmenagogues are but limited agents, and most generally require the assistance of powerful general means, and are frequently rendered wholly superfluous by the judicious use of the latter. The cause of this, although not adverted to by Dr. E. appears to us to be plain and worthy of notice.

Diseases of menstruation are, in the great majority of instances, to be attributed to derangements of the general health, and are therefore removed by the same means which are adapt-

ed to the cure of the latter. Hence in cases of relaxation or debility, superinducing amenorrhœa, &c. tonics, the cold bath, exercise, &c. produce in general the removal of the obstruction in the uterus; and on the other hand, where too great a tonicity of the animal fibre, or a phlogistic diathesis are the causes of the obstruction, antiphlogistic means will be found not only serviceable, but indispensable, in producing the same result.

Under the second division of this class, Dr. Eberle places abortiva, of which one article only is certainly known to produce the effect implied by the term, the secale cornutum, or ergot. On this subject he has chiefly taken his abstracts from the valuable paper of Dr. Stearns, which has appeared in this Journal.

Narcotics.—The article treating of opium is very ample, and contains a large mass of practical information drawn from the most respectable sources. We have not room except for the following enumeration of the general effects of this substance.

1. Its primary effect in a small or regular dose, is an increase of the force and frequency of the pulse. When administered in a large dose, its stimulant effect is scarcely perceptible, and the pulse becomes slower and fuller.

2. Opium lessens muscular irritability, and diminishes the peristaltic motion of the intestines.

3. It checks some of the secretions, but renders others more profuse. As instances of the first effect, may be cited the gastric and pancreatic secretions, and the secretions from the mucous membranes. The serous secretions on the contrary, are augmented.

4. It at first excites, but afterwards depresses, the powers of the brain.

The utility of opium in dysentery, was for a long time disputed on the authority of Cullen. This physician, warped by his peculiar theory with respect to this disease, deprecated the use of opium. He considered dysentery to be little more than a constriction of the bowels, and was apprehensive that opium

would still further increase this constriction, and lock up the irritating matters lodged in them. We know, however, from experience, that although opium does in general constipate the bowels, there are particular cases in which it is attended with an opposite effect. Thus, when the bowels are highly irritated, as they are in dysentery, or when they are affected spasmodically as in colic, opium, by removing the irritation and subduing the spasm, leaves them free to resume their peristaltic motions which had been interrupted. In this way, but always after early depletion, the administration of this valuable narcotic is frequently attended with the happiest effects; and, as is observed in the book before us, if accompanied at the same time with proper laxatives, it often aids in bringing away considerable stercoraceous matter. From all this it appears, that although while active inflammation exists, opium may be dangerous, as soon as this is reduced by the proper means, it may be had recourse to with the greatest advantage. In the latter stages of dysentery it is frequently indispensable.

"In chronic dysentery it is very advantageously combined with calomel, a combination indeed upon which our principal reliance is in general to be placed in its treatment. From the intimate connexion which exists between the external surface of the body and the mucous membrane of the intestinal tube, it is evident, that on the principle of derivation, much advantage may be gained by exciting the vessels of the skin. It is therefore proper in most cases, to combine the opiate with some other article, which, without interfering with its anodyne properties, will increase its tendency to act upon the cutaneous exhalents." Vol. II. p. 29.

We can bear witness to the propriety of this practice. The skin in chronic dysentery is almost always dry and husky, and action once excited there, the intestines are sensibly relieved. To the use of calomel and opium gentle tonics should however be added, and will be found to assist in the cure.

Dr. Eberle thus speaks of opium in colica pictonum.

"Administered in very large doses, and in combination with proper laxatives, it affords more immediate relief than any article I am acquainted with." Vol. II. p. 29.

"I have had a very considerable experience in this disease, and my reliance has been uniformly placed on the exhibition of large doses of calomel

and opium in combination, repeated two or three times a day, until the gums were affected by the mercury. In general I have observed no *permanent* relief is obtained until the calomel affects the general system. The opium, however, is indispensable to mitigate the immediate sufferings of the patient; and when given in a very large dose, from six to eight grains, it not unfrequently enables the calomel to open the bowels, especially when assisted by a dose of castor oil.

Epispastics.—Dr. Eberle suspects that more advantage is derived from the secondary, or *purulent* discharge, occasioned by blisters, than from the evacuation which is the immediate consequence of vesication. In confirmation of this view he adverts to the manifest influence which the occurrence of abscesses and the appearance of artificial eruptions exert over diseases. The suppression of these discharges is, on the contrary, attended with great danger. This view of the modus operandi of blisters may be correct as to their effect in chronic cases, but it will be hardly sufficient to account for the beneficial effects they almost instantaneously produce, when applied in a sufficiently powerful form, and in severe cases, as for instance in the cholera of the East Indies. Their agency here must be explained on a different principle. The evacuation of serum or pus is comparatively too trifling to allow us for a moment to suppose that this circumstance relieves the affection. It is the derivation of nervous action and of the circulating fluid from the part previously affected to the newly inflamed part, which in our opinion brings about the favourable change. Dr. Eberle has strangely omitted all consideration of the influence of blisters upon the nerves, as manifested by the pain and irritation which they excite, and which in themselves are powerful means of derivative relief.

Sialagogues.—Mercury.—Believing with Dr. Cullen that this important article is a stimulus to every sensible and moving fibre of the body, we must object to the position which our author has assigned to it among the sialagogues—a class of stimulants which, strictly considered, are wholly local in their operation. That mercury is a salivant, and of the most powerful kind, no one will deny; but that its title should be founded on one of its local effects, when it produces others of

a general nature, and far more important in themselves, cannot be deemed consonant with the spirit of philosophical classification. Besides, salivation is after all an incidental operation of this medicine, not common to all its preparations, nor essentially necessary to the cure of those diseases in which its presence has been deemed the most beneficial. The very importance which has been attached to salivation arises from the circumstance, that this occasional result of the operation of mercury is considered as an evidence of the successful influence which the medicine has exerted over the *general system*. From its general effects then, and not from one that is local, should the designation of the article be derived. In advancing these remarks we have no intention to disparage the merits of mercury as a sialagogue, more than as an errhine, a cathartic, a diaphoretic, a diuretic, &c.; on the contrary, it is from this very consideration, that it possesses one and all of these salutary powers, that we would insist upon the necessity of considering it, when discussing its general character, as a general and not a local stimulant.

Our author considers that there are three modes in which mercury acts in producing its effects on the animal economy. He says, "1. It is absorbed into the circulation and acts through the medium of the blood. 2. It produces a primary impression in the part to which it is applied, which impression is propagated to other parts by means of the nerves. 3. It acts locally, by simply exciting an action in the parts to which it is directly applied."

In following the steps of another writer, Dr. Eberle has here fallen into a most awkward arrangement, which does not elsewhere disfigure his own divisions. A moment's reflection will convince him of the propriety of reversing the order here adopted; if, indeed, a more simple and unincumbered one be not rather preferred. We would, however, suggest it as an improvement that the effects be considered, 1st. As they are local or primary, the mercury acting on the part to which it is directly applied; 2ndly, As they are general or secondary, propagated to distant parts of the system, either through the

medium of the circulation or by nervous sympathy. This arrangement is at least the most natural, and it comprises all the three modes referred to in the text. The manifestations of the different modes in which mercury acts are well known. Its local operations are evinced by purging and vomiting, by its anodyne effects in cases of morbid irritability of the intestines, &c. Its general operation is evinced in the increase of the action of the heart and arteries, the increase of the action of the secretory organs in general, &c. Hence it proves remediate according to Dr. Eberle.

"1. By producing a new and peculiar excitement in the system, which overcomes the morbid excitement prevailing on the principle suggested by Hunter, that two different diseases cannot exist at the same time in the human body.

"2. By equalizing the circulation, and thereby removing local congestions.

"3. By establishing an afflux to the inflamed glands of the mouth from the neighbouring parts.

"4. By exciting discharges from the bowels and the various excretory glands of the body." Vol. II. p. 411.

Our author very justly observes, that the instances in which, owing to peculiar susceptibilities of the system, the action of mercury is attended with distress and danger, and permanent injury to the constitution, are very rare, and depend on circumstances independently of any inherent *poison* in the medicine. We may further observe, that the diseases which are supposed by certain timorous and prejudiced writers to be the effects of mercury, might frequently be traced to other causes, such as mismanagement, and more especially to the violence of preceding disease. Much mischief too arises from the abuse of mercury, as from that of every powerful article. But shall we, therefore, blindly reject every means of opposing disease excepting such as are incapable of abuse, or in other words, inert? There is no agent of good on the face of the earth but may be made the instrument of proportionate evil, and this holds no less in the medical than in the moral and physical departments of nature.

There are some constitutions which seem to be altogether unsusceptible of the action of mercury. Where this depends on idiosyncrasy, it will be found almost impossible to bring on the specific action of the medicine. But in the greatest number of instances, this unsusceptibility will be found to be connected either with a very debilitated condition of the system, or with a very full and phlogistic habit. The restoration of vigour to the system in the first case, and the reduction of its excess in the second, will remove the resistance to the operation of mercury.

In other cases, not exactly falling under any of this description, nauseating doses of antimony, or ipecacuanha, have been found highly serviceable in awakening the dormant susceptibility of the system to the influence of mercury.

Dr. Eberle adduces the following example of the efficacy of this practice, which it appears he learned from Dr. Joseph Klapp of Philadelphia:

"Of the efficacy of nauseating doses of antimony, in overcoming the resistance of the system to the action of mercury, I have lately had a remarkable example. After having tried ineffectually, for nearly two months, to bring a venereal patient under the specific influence of mercury, employed both externally and internally, I at length, by the suggestion of Dr. Klapp, gave him nauseating doses of tartar emetic, and by these means succeeded, in less than three days, in establishing a gentle salivation." Vol. II. p. 408.

Dr. Eberle informs us, that Dr. Klapp employed this practice several years before Dr. Paris's observations on the same subject made their appearance.

With regard to the introduction of mercury into the treatment of acute diseases, our author observes:

"Mercury was for a long time almost entirely confined to the treatment of chronic diseases. About the middle of the last century it was introduced by some of the New-England practitioners as a remedy in acute inflammatory fevers; and soon afterwards Dr. Robert Hamilton of Lynn Regis, in England, published his valuable observations on the efficacy of calomel and opium in inflammatory disorders." Vol. II. p. 412.

Whether the introduction of mercury in the treatment of inflammatory disorders originated in this country or not, certain it is, that the very early adoption of so powerful an ar-

ticle, to the use of which the fears of the ignorant have been no less opposed than the prejudices of the learned, entitles the physicians of our country to an ample share in the honours due to original, bold, and successful practitioners.

Its application to almost every disease in some one or other of its stages, has now become very general, and the use and the abuse of it are so well known that we shall not dwell on this portion of our author's labours. We refer to them for ample information on the uses to which this medicine has been applied.

We have now laid before our readers those portions of the book before us which we deemed the most worthy of their attention, and the best calculated to attract them to a further acquaintance with its merits. In conclusion, we cannot avoid remarking that we consider Dr. Eberle entitled to much praise for expunging from the list of remedies a great number of articles which are either inert or of doubtful efficacy.

ART. II. ELEMENTS *of* MEDICAL JURISPRUDENCE. By THEODERIC ROMEYN BECK, M. D. Professor of the Institutes of Medicine, and Lecturer on Medical Jurisprudence in the College of Physicians and Surgeons of the Western District of the State of New-York, &c. &c. Albany, 2 vols. 8vo. 1823. Vol. I. pp. 418, vol. II. pp. 417.

THE subject matter of these pages embraces topics of deservedly great interest: they are the result of long and severe study, and that too by one zealously devoted to the cultivation of this branch of science. We believe the work to contain a more ample exposition of the subjects of which it treats than any other that has heretofore appeared in our language. Our habits of personal acquaintance with the author, independently of other circumstances, will prevent us from giving any thing further than an analytical notice of the volumes.

Medical jurisprudence, Legal medicine, or Forensic medicine, as the science is variously termed, is that species of

knowledge which applies the principles and practice of the different branches of medicine to the elucidation of questions in courts of judicature. It is by some authors considered in a more extensive sense, and thus embraces *medical police*, or those precepts which may prove serviceable to the legislature or the magistry. In its more restricted signification Dr. Beck has taken up the subject at this time.

As a suitable introduction to the work, Dr. B. has given us a brief history of forensic medicine; and he very properly observes that traces of this science are to be found in the Jewish laws. The code of Justinian, it is well known, possessed many provisions embraced in juridical medicine, not a few of which are incorporated into the laws of civilized countries. The Caroline code, however, is the first of importance that lays claims to the notice of the historian of forensic medicine. It was framed in 1532, under the auspices of Charles the fifth of Germany: it ordained, among numerous other provisions, that the opinions of medical men should be formally taken in every case where death had been occasioned by violent means. We pass over the services which several of the kings of France rendered this branch of knowledge: their example in this respect was most happily followed by the illustrious chieftain who lately occupied their throne.

It is generally conceded that the earliest writer laying claim to any merit of systematic arrangement in legal medicine, was Fortunatus Fidelis, whose work appeared at Palermo in 1602. He was followed soon after by the celebrated Paulus Zacchias, the author of the "Questions Medico-legales," a work of huge extent and of immense research and merit. It was issued at Rome between the years 1621 and 1635; and has justly secured to Zacchias the title of the Father of Medical jurisprudence. Some short while after this period, many authors of deserved regard, on this science, appeared in Germany: Dr. Beck very properly designates, in particular, the valuable and comprehensive collections of Schlegel. "It consists," says Dr. B. "of upwards of forty dissertations on various parts of medical jurisprudence, written by Germans at different periods

during the eighteenth century, and is alike honourable to the national character, and the individuals whose investigations appear in it."

Several of the more able authors of France are next noticed by Dr. Beck. Louis is considered as the individual who first promulgated a just idea of the science to his countrymen. He investigated several important points with great ability. His consultations in various cases, and which are preserved in the Causes Celebres, abound in various and instructive learning. Fodere and Mahon, have each their respective merits briefly pointed out, and the toxicology of the indefatigable and enterprising Orila, is spoken of by our author with becoming commendation. Professor Capuron in 1821, published a small work on legal medicine, so far as it relates to midwifery.

The history of medical jurisprudence as cultivated by the English, is necessarily very brief. Scarcely any thing indeed had been done by that people for the advancement of this branch of study prior to the appearance of the work of Dr. Smith, in 1821, which performance is entitled to particular praise. The elements of Dr. Farr were, to a certain extent, serviceable, and the medical ethics of the late Dr. Percival, also contributed some useful facts: but to Dr. Smith are the profession to look for the first happy display of many interesting circumstances, interwoven with the science of legal medicine and the practice of the British courts. The most copious and professedly systematic work on the subject which has issued from the English press, is that by Dr. Paris and M. Fonblanque, Esq. To the enlightened labours of Dr. Duncan, jun. of the University of Edinburgh, may be fairly ascribed that awakened zeal to forensic medicine which animates British practitioners at the present day. Dr. Beck has very properly observed, "if the publications contained in the Edinburgh Medical and Surgical Journal, of which he is the editor, are to be deemed any criterion on this subject, I should not hesitate to declare my decided conviction, that Dr. Duncan is

at present the ablest and most learned medical jurist in Great Britain."

Dr. Beck has favourably noticed the very little that has been done for this science in his native country. Dr. Rush in an introductory discourse published in 1811, dwelt in an eloquent and impressive manner on the importance of juridical medicine; and in 1817, the learned Judge Cooper, M. D. republished in one volume, with notes, several tracts on the subject by English writers. Some of the inaugural dissertations of our graduates have contributed to the same laudable end. Lectures on this science have been, and are still delivered in several of our colleges. With becoming feelings, Dr. Beck states that his impulse towards this study was derived from an attendance on the lectures of the late Dr. Stringham of New-York, who was the first that ever delivered a course on medical jurisprudence before an American audience. His surviving auditors will bear united testimony to the discrimination and good sense which characterized the instruction imparted by this accomplished professor. The appearance of Dr. Beck's volumes, makes us the less regret that the friends of Dr. Stringham have not yet been gratified by the publication of his lectures; which would have furnished at once an outline of the then existing state of knowledge on the subject, and a suitable memorial to his reputation. But we proceed to the consideration of Dr. Beck's work, which is of a higher character.

In his first chapter, Dr. Beck has treated at some length of that perplexing and prolific subject, *feigned diseases*. From Zacchias he has derived the general rules for the detection of these impositions which are acknowledged to be so discriminating as to have received the sanction of most succeeding writers. Among the disorders which at various times have been feigned, we find the following: alteration of the pulse; altered state of the urine; hæmaturia; incontinence of urine; suppression of urine; maiming and deformity; dropsy and tumours of various kinds; excretion of calculi and various foreign matters; ulcers; hæmoptysis; hamatemesis; jaundice, and cachexia; fever; pain in various parts; syncope and hysteria; diseases

of the heart; apoplexy; paralysis; epilepsy; convulsions; catalepsy; nostalgia; near sightedness; ophthalmia; blindness and deafness, with or without dumbness.

In this interesting chapter, we have many curious and instructive cases recorded, several of which we should be happy to transfer to our pages, did our limits permit. We cannot withhold the following:

"That species of *blindness*, which originates from amaurosis, is strongly characterized by the dilated and fixed pupil. There are, however, cases in which the pupil retains some contractile power, although we know the sight to be lost. In such an instance, epispastics, and setons, are proper; and if suspicion exists, the patient should be watched, to see whether he does not avoid obstacles put in his way. If this be carefully pursued, the deceit is often detected. The following case, however, occurred to Mahon. A young conscript was sent to the corps blockading Luxemburg. Having passed the night at the advanced posts, he declared himself blind the next morning, and was sent to the hospital. The surgeons used the most powerful remedies, and were convinced that the disease was feigned, as the pupil contracted perfectly. He assured them, however, that he could not see, thanked them for their care of him, and asked for the application of new remedies. He was sent to the superior medical officers at Thionville. They also were convinced it was a fraud; but having learnt the course that had been pursued, they determined on a last trial. He was put on the bank of a river and ordered to walk forward. He did so, and fell in the water; from which, however, he was immediately taken by two boatmen stationed for that purpose. Convinced of his blindness, but unable to explain the dilatation and contraction of the pupil, the surgeon gave him a discharge; but warned him at the same time, that if his disease was feigned, it would prove of no avail, as it would sooner or later be ascertained that he was not blind. They offered him another, if he would confess the fraud. He hesitated at first; but being at length assured that they would keep their word, he took up a book and read.* 'The proof in this case,' says Foderé, 'would have been complete, if, instead of a river, he had been put on the edge of a precipice, where he might see that nothing could prevent his destruction—*but what if he had been really blind?*'

"*Pretended deafness*, may be detected by making a noise at a moment least expected. This excites a sensation which it is difficult to conceal. Acute persons will also always find some mode of ascertaining the truth. A deserter, condemned to labour in the canal at Arles, said he was deaf, and passed for such with his comrades and guards. Being brought before

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* Mahon, i. 360.

the inspector to be examined, he appeared such as he stated, until Foderé spoke to him in a low tone of voice, saying, 'you cannot persuade me that you are deaf; but if you will confess the truth, you shall have your discharge.' To the astonishment of all, he answered, 'Very well; I am not deaf.'* Again, a conscript stated that he was deaf. The general who visited him for the purpose of examination, let fall a piece of silver behind him. The deaf person turned his head round towards the place from which the noise proceeded, and by this means was detected.† 'Who would believe,' says Baron Percy, 'that by exercise, some young men have so successfully affected deafness, that a fire of musquetry exploding suddenly at their side could not draw from them the least mark of fear or surprise? I knew one, however,' he adds, 'who betrayed himself at last before his judges, at the sound of a small piece of money designedly dropped on his foot, while it was whispered in his hearing, that he was certainly going to be discharged.'‡

"Those who pretend to be *deaf and dumb*, have a still more arduous part to play, and need an art and perseverance of which few are capable. Such who are really in that unhappy situation, acquire a physiognomy and certain gestures which it is difficult to assume, and which it is impossible to prepare for every examination that may be made. In reviewing the histories of those pretending deafness and dumbness, it has been found, says Foderé, that women have been most succesful, and the sex fondest of talking are the most capable of feigning dumbness.

"The Abbe De L'Epée was deceived by a pretended deaf and dumb person, who feigned to be the son of Count De Solar. Sicard, however, his successor, was more fortunate in detecting the villany of another, whose ingenuity resisted for four years an infinite number of investigations made on him in France, Germany, Switzerland, Spain, and Italy. This young man was named *Victor Foy*, and was from Luzarche, six leagues from Paris; but called himself *Victor Travanait*—travelling, as he said, in search of his father, but in reality to avoid military duty.

"He was imprisoned in various countries, watched closely, and examined most rigidly, without being detected. So perfectly, indeed, had he accustomed himself to his part, that when he avowed the fraud, to use his own expression, he had unlearnt how to hear. In Switzerland, he was tempted by a young and beautiful woman, who offered him her hand, but without effect. In the prison at Rochelle, the turnkey was ordered to sleep with him, to watch, and never to quit him. He was frequently awakened in a violent manner, but his fright was expressed by a plaintive noise, and in his dreams guttural sounds alone were heard; and the hundred prisoners, who were all ordered to detect him if possible, could discover nothing from

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* Foderé, 2. 475. † Belloc, p. 252.

‡ New-York Med. Repository, vol. XVII. p. 359.

which they could imagine deceit. At last the officer charged with the police of the prison of Rochelle, became satisfied, after many examinations, that he was really deaf and dumb, and declared this in the public journals, so as to obtain his liberty. Victor unhappily at this period went beyond his capacity. He stated himself in writing to be an elève of the Abbe Sicard. This ingenious and worthy individual denied the fact without seeing him, and proved it from the writing. 'I cannot tell,' said he in a letter to the counsellor of state, Real, 'whether this person confined at Rochelle, be really Victor Travanait, or not; but I can positively say that he was not born deaf and dumb.' The reason which he assigned for this opinion, was, that he wrote from sound, while the deaf and dumb write only as they see. In his letters he appeared so ignorant as to divide some words, and annex prepositions to others, as if they were constituent parts. The following extract will serve as a specimen: '*Je jur de vandieux, ma mer et nè en Nautriche, quhonduit* (pour *conduit*) *essepoise* (pour *espoir*); *torre* (pour *tort*); *ru S. Honoret, jai tas present* (pour *j'etais present*); *jean porte en core les marque* (pour *j'en porte encore les marques*).' It will be observed that in this letter Victor uses *q* instead of *c*; and from this Sicard inferred that he had heard, and knew that the sound of these gutturals was similar. He concluded by stating his conviction that Victor was not born deaf, and of course was not dumb.

"The criminal was now brought to the institution for the deaf and dumb at Paris, and placed before the black board. He was ordered to write answers to questions put to him by Sicard, which he did in so able a manner, and eluded the most embarrassing questions so ingeniously, that nothing but his orthography could yet be adduced against him. Sicard had taught his pupils to articulate sounds, and he had done this by showing them the words as it were, by the apparent effects of touches on a musical instrument, and then pressing their arms more or less strongly. During this operation, he obtains at pleasure the hard or soft consonant, which serves as a sign for the required articulation. Victor, when put to this proof, instead of the syllable *pa*, pronounced only the vowel *a*, and never uttered the labial consonant, which all the deaf and dumb easily articulate. He was then put to the last test. When asked how he had been instructed, he answered by signs, and promised to explain by them such words as they might write on the black board, but could not do so. He was then placed among those who were really deaf and dumb, but understood nothing from them, neither could they comprehend him. Frightened at this detection, and still more so at the threat he had heard, that he would be confronted with the pastry-cook, to whom he had been an apprentice, he at last took up a book and read.*

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* Foderè, vol. II. p. 478—9. When Mr. Clerc, the distinguished teacher of the deaf and dumb at Hartford, visited Albany, he informed me, that he was one of the pupils who assisted in detecting Victor.

"It is an observation of the author from whom I have taken this case, that it was Victor's folly alone which detected him. Had he not asserted that he was a pupil of Sicard, he might have escaped. But he was ignorant that all were educated alike, and of course, should express their ideas in a similar manner."*

On the *disqualifying diseases*, constituting chapter second, Dr. B. considers the subject as, 1stly, to the disqualifications in civil and criminal cases; 2dly, as to those for military service; and 3dly, as to the rules for certificates, and the law respecting them. Under the second head, among other important matters the author enters somewhat into an examination of the question, what diseases should incapacitate from military service? With the exception of a solitary paper on this subject, by Professor Mitchill of this city, Dr. B. observes, we have no written rules to guide the American military surgeon. Many of the regulations, however, which are adopted by the governments of Europe, might furnish us with principles which to a certain extent, would regulate us in this particular. Several of the rules formed by the government of France, and adopted by Napoleon, would doubtless materially aid us in the formation of salutary ones for ourselves. We must request the reader to examine the pages of our author (p. 33—43) for the list of disqualifying diseases. By the French law, "all officers of health, and others, convicted of having given a false certificate of infirmities or inabilities, or having received presents or gratifications, shall be punished by no less than one, or more than two years imprisonment; or by a fine not less than three hundred nor more than one thousand francs."

Chapter III. On *Impotence* and *Sterility*.—Medical men are more frequently consulted on these points than is generally supposed; and to the medical jurist it is perhaps doubly necessary that they be well understood. A knowledge of this subject may often become necessary before judicial tribunals.

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* A case of pretended *deafness and dumbness* in this country, by a person named *James Stilwell*, was detected by Mr. Clerc in 1822. The imposture in this instance was, however, more clumsy than in the one in the text. See the National Gazette, Sept. 14, 1822.

An individual accused of committing rape has been known to plead that he was physically incapacitated, while the legitimacy of children has been contested on a similar plea. The laws of the Jewish legislator, Moses, and afterwards the Roman law, permitted divorce at the pleasure of either party. The Justinian code, embracing the principles of the Christian law in this particular, declared marriage to be indissoluble, yet at the same time prescribed the mode of obtaining divorce, and promulgated statutes as to impotence. It would seem that the Napoleon code did not expressly declare absolute and incurable impotence to be a cause for dissolving marriage; but the course of legal proceedings under it, according to our author, leads to it. The English law may be found in Blackstone. In these American States the English law is in force; and the fact having been established of impotence before marriage, is a sufficient cause for dissolving that connexion. Repeated applications have been made to the legislature of New-York for divorce, on the ground of impotence supervening after marriage; but they have uniformly been rejected. The causes of impotence are divided by Dr. B. into the absolute, curable, and accidental or temporary. The termination of the canal of the urethra at some other place than what is natural, has been deemed by some as an absolute cause; while others assert that though coition may be possible, yet it will prevent pregnancy. Belloc as well as Zacchias, however, have mentioned cases contradictory to this belief. The first of these writers relates that he knew a person at Agen in whom the orifice of the ureters terminated at the bottom of the frenum, and who had four children resembling their parents, and what is still more remarkable, two of them had the same mal-formation. In a former number of this Journal* we stated an instance of an individual now living in New-York, who notwithstanding this mal-formation had two children. Dr. B. thinks that much in such cases will depend on the distance to which the orifice is thrown back. The inability to

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* Vol. II. p. 12.

propel the semen out of its vessels is frequently to be considered as an absolute cause of impotence; but generally it is a curable one. Many other conditions, either of the system, or of the genital parts themselves, are noticed by Dr. B. upon which we cannot at present dwell. Among the curable causes of impotence we find our author has very properly mentioned an atony of the parts, arising sometimes from local disease or external injury; and at others from masturbation. Every practitioner must have witnessed instances of this nature. Fortunately for the sufferer they are not irremediable. But the most important causes of this serious state of the system, are those denominated the accidental or temporary; since they are frequently the subject of legel investigation. They are those which affect an individual during his marriage, and are of course to be considered in cases of contested paternity.

On the subject *doubtful sex*, constituting chapter IV. we find sufficient notice of various cases of malformations of the genital system, which have led to the belief by some, of the existence of a class of beings, denominated hermaphrodites, but which enlightened philosophy wholly discards. The ancient laws, as well as the English common law concerning androgyni, are also briefly given.

Next follow three chapters on the several subjects, *rape*, *pregnancy*, and *delivery:* and under these heads we have perhaps a majority of all these topics embraced that most frequently present themselves to our consideration in courts of judicature. The first of these chapters, that on rape, includes a consideration of the signs of virginity; those of defloration and rape. It is well known that according to our laws, the testimony of the insulted individual is sufficient to condemn the criminal; yet notwithstanding this, it often happens that the opinion of the physician is required. Hence a knowledge of the signs of virginity is requisite. Of these signs that concerning the existence of the hymen has probably been most contested. Many eminent anatomists have denied altogether the existence of this membrane, or have considered it as a preternatural or morbid formation: the celebrated Parè is of this number. On the other hand Albinus, Ruysch, Morgagni,

Haller, Cuvier, and others believe in its presence previous to sexual intercourse. Dr. Beck very properly decides in behalf of the existence of this membrane. Anatomists have maintained that the carunculæ myrtiformes were the remains of the ruptured hymen. Our author cites the testimony of Conquest that the carunculæ may be found when the hymen remains entire. The sections on the signs of defloration and rape, and on the laws of various countries concerning this crime, are quite elaborate. The laws of our states differ as to the degree and nature of the punishment.

In the state of New-York, an assault with an intent to commit a rape may be punished by fine and imprisonment, or both. In the states of Delaware, South Carolina, Connecticut, Massachusetts, and Illinois, death is prescribed. While in Pennsylvania, Virginia, Vermont, New-Hampshire, and New-Jersey, imprisonment for a long term of years, with or without fine, is directed. On the vexed question, Does pregnancy ever follow rape? Dr. B. remarks, "I should consider that pregnancy was not incompatible with the idea of rape." This opinion, though at variance with that of several medical jurists, is, in our view of the subject, justifiable; and we are pleased to observe that the celebrated Dr. Good has lately countenanced the same doctrine.

Scarcely a circumstance connected with pregnancy can be matter of indifference to the student of medical jurisprudence; and when we state that eighty closely printed pages are devoted to this subject and to delivery, the reader will justly conclude that the information to be derived from this work on these topics is at least ample. Pregnancy is considered by Dr. B. under four divisions: 1st, the laws of various countries relating to the existence of pregnancy; 2dly, the signs of pregnancy, together with the best mode of ascertaining concealed or pretended pregnancy; 3dly, the arguments and proofs in favour and against the doctrine of superfœtation; and, 4thly, some questions arising out of the previous examination.

The French civil code declares that no female shall be allowed to contract marriage before the age of fifteen full years;

nevertheless such marriage shall not be dissolved, 1st, when six months have elapsed after the female, or both of the parties, shall have attained the required age; and, 2d, when the female although not of the required age, has become pregnant before the expiration of six months. Of the changes which take place in the system, from conception we have a very minute examination. Every practitioner is aware how fallacious many of these signs are, more especially during the early months, whether occurring in the uterus itself or in the system at large. The more important evidences of pregnancy are, the expansion or enlargement of the abdomen; a change in the state of the breasts; the suppression of the menses; the loss of appetite, nausea, vomiting, &c., the motion of the fœtus in the womb of the mother; an alteration in the state of the uterus. Dr. B. fully investigates all these changes; and like other eminent writers on the subject, gives it as the result of his observation and study, that the medical jurist is bound to weigh all the *possible* causes that may produce these various changes, and that he is to recollect "that all of them have occasionally proved uncertain or equivocal. *There is no one invariable sign of pregnancy.*"

It was a postulate with many of the ancients, and inculcated by Aristotle, that when milk is secreted pregnancy has occurred. Our author cites several well authenticated cases to invalidate this rule. Denman considered the suppression of the menses as a never-failing consequence of conception; but he is opposed by Heberden, Daventer, and others. Our own limited experience is in contradiction to that of Dr. Denman. The motion of the fœtus cannot always be felt by the mother. A case showing the uncertainty of its occurrence, is quoted by Dr. B. from Capuron. A female with a very large abdomen was received into one of the hospitals of Paris; she was visited by many distinguished accoucheurs, surgeons, and physicians. Some declared that she laboured under ascites, others, that a scirrhous and dropsical ovarium was present. An abdominal pregnancy was also suspected, but no one believed it to be real pregnancy, since no motion of the fœtus could be felt. The woman was

kept on light food, and innocent remedies were administered. The volume of the abdomen enlarged, and, at last, after three weeks of examinations and consultations, a strong and healthy child was born.

Quickening is considered by Dr. B. to be produced by the impregnated uterus starting suddenly out of the pelvis into the abdominal cavity. This view we believe to be among the best founded of all the various theories concerning this physiological fact that have been advanced.

We must refer to our author's own pages for his disquisitions concerning superfœtation. For our own part we do not think the subject yet cleared of all its difficulties. The case published recently by Dr. Maton of London, needs further explanation. "Should the doctrine of superfœtation," says Dr. B. "ever be pleaded in medico-legal cases, we must be guided by the laws of legitimacy, both as to premature and to protracted births. The latest born should fall within the legal term, or be excluded from the privileges attendant on it; and this is more particularly necessary from the obscurity that invests the subject."

A natural consideration of the subject *delivery*, is under the twofold view as it respects the mother, and as it respects the child. This chapter is accordingly arranged in divisions as to the mother; 1st, concealed and pretended delivery; some medico-legal questions connected with the subject: as to the child; the signs of death of the child before or during delivery; the signs of maturity or immaturity; and lastly, the state necessary to enable the new-born infant to inherit.

Among the evidences of recent delivery, Dr. B. has very properly enumerated the lineæ albicantes: we cannot so confidently approve of his dependence on the areolæ. "The areolæ," says Dr. B. "round the nipples, are dark coloured." This sign we are aware, has been most insisted on, but we are induced from actual observation to believe it not well founded. In cases of recent delivery, in answer to the question *within what time* should the examination of the female be made? our author justly considers the term of eight or ten days at furthest,

as most proper for this purpose. Dr. B. concludes this part of his subject by considering those instances where the female has been actually delivered, and for sinister designs substitutes a living for a dead child. The highly interesting case of Charles Angus of Liverpool, in which the learning and talents of Dr. Bostock, now of London, were so eminently conpicuous, is given at some length, inasmuch as it points out many of the difficulties that may here occur in judicial investigations.

The consideration of the *cæsarian section* and extra-uterine conceptions, closes this portion of the work.

Chap. VIII. On *Infanticide*, is written by Dr. John B. Beck.

Legitimacy, which necessarily includes the consideration of gestation, its variations in duration, in different animals and in the human race, causes thereof, premature delivery and the like, with an exposition of the laws of different countries on the subject of legitimacy, form the ensuing chapter.

It is of essential importance to the physician well to understand some of these topics. We have within a short while heard of an opinion being given, and upon which much confidence is placed, that the distinctive marks of an eight and nine month's child, are sufficiently conspicuous for a legal decision to be founded thereon. Dr. B. observes, that the fact that dead children and twins are born at the regular period, is certainly a strong proof of there being a fixed term of gestation. On premature delivery, however, Dr. B. thus expresses himself: "There is an intrinsic difficulty connected with this question, which should lead us to be tender in forming our opinions, and this originates from the variety observed in children when born at the full time. They differ in size, general appearance, healthiness, &c.; and sometimes indeed, we know that eight months' children have been observed larger and healthier than those of nine months. The general appearance, then, should be noticed, but not too much relied on, in forming an unfavourable opinion."

We are apprehensive that Dr. B. has spoken too decisively on the subject of protracted utero-gestation; but we dare not find fault where there is so much to commend.

The caption of chapter X. is all that we can admit; 1st, of the survivorship of the mother and child, when both die during delivery. Cases that have been decided in Germany, in France, in the state of New-York; 2d, of the presumption of survivorship of persons of different ages destroyed by a common accident. Laws on this subject, Roman, ancient French, Napoleon code, English. Cases that have occured under each. Propriety of having fixed laws on this subject.

Under the head of *age* and *identity*, we have several very interesting cases. "In the state of New-York, the presumption of the duration of life, is reduced to the period of five years, provided the party has not been heard of during that time; and marriages are allowed to be contracted after the period stated; but the space of seven years is adopted in the act for the more effectual discovery of the death of persons, upon whose lives estates depend." With regard to the question at what age pregnancy is possible, and beyond which it cannot occur? Dr. B. cites the remarkable instance given by Meyer, of the Swiss girl, who became a mother at nine years of age. As to facts of this nature, he justly observes, they are to be considered as examples of precocity resembling those which occasionally occur in the other sex. "The English law admits of no presumption as to the time when a woman ceases to have children, though this enters into most other codes." We believe that neither our American laws nor any proceedings in our courts, have yet given any decision on this point.

Dr. B. has chosen the term *mental alienation* to designate the various affections of mind ordinarily denominated *insanity*. This prolific subject is arranged under several heads; the symptoms which constitute insanity; of feigned and concealed insanity; of the legal definition of a state of mental alienation, and the adjudications under it; of inferior degrees of diseased mind; of the state of mind necessary to constitute a valid will; of the deaf and dumb; their capacity, and the morality of their actions. In treating of *idiotism*, Dr. Beck observes that individuals labouring under congenital idiotism, are marked by some striking characters; and among other observations,

gives his belief that the *skulls of such subjects are smaller and inferior in height to the skulls of maniacs.* An examination of this contested point, inclines us to a belief the opposite of that advanced by Dr. B.; and we apprehend that some of the conclusions, both of Gall and Spurzheim on this question, have been too hastily made. We cordially recommend the observations of our author on feigned and concealed insanity. The subsequent portion of the chapter is no less deserving attention.

The second volume opens with an ample discussion of the subject, *persons found dead.* We must for want of room, still more closely than in considering the first volume, limit our present remarks. The following matters are discussed in this chapter: medico-legal dissection; persons found dead from noxious inhalations; persons found hung; persons found strangled; persons found drowned; persons found smothered; persons found dead from wounds; persons found burnt to death; persons found dead from hunger. Deserved praise is bestowed by Dr. B. on Marc for his writings on medico-legal dissection. The *Causes Celebres*, Mahon, Fodere, the English state trials, as well as the decisions of the American courts, have been thoroughly examined, and furnish many interesting cases for this section of Dr. B's inquiry.

The several questions connected with *wounds*, or lesions on the living body, are next taken up; also, the laws as to the time within which death from wounds is deemed murder; mutilation, &c.; wounds of the heart, of its ventricles and auricles, says our author, are mortal: "but it is remarkable, that numerous cases are on record, where life has been prolonged for a considerable time after the infliction of the injury." Bohn quotes several cases of this kind, and an instance occurred in the British army in Spain, some years since, "where a soldier survived for thirteen days with a musket-ball in his heart." The discussion of wounds in a medico-legal point of view, is in so many respects, peculiar, that we believe the most skilful adept in surgery, will find novelty in the perusal.

The remainder of the second volume treats of *poisons*, unquestionably the most important, if not the most difficult subject in legal medicine. Dr. B. has arranged this part of his work under three general divisions; 1st, the signs of poison in the living body; 2dly, the signs of poison on the dead body; and 3dly, the various substances that may or have produced these dangerous and fatal effects. The individual poisons under the ordinary classification of mineral, vegetable, and animal, are then examined in their respective relations as subjects of medical jurisprudence; as to their action, the changes they produce on the system, means of relief, tests, and the like. We find some substances here introduced that we have not before observed in any treatise of forensic medicine.

Pathology has recently thrown much light on a subject heretofore involved in great obscurity, and the facts which we at present possess ought to be strongly impressed upon the mind of every person who purposes forming an opinion concerning the effects of different poisons on the stomach. We here allude more particularly to the valuable observations of Baillie on the ordinary appearance of the stomach, and especially to the researches of Dr. Yelloly, contained in his paper published in the Medico-Chirurgical Transactions of London, vol. IV. entitled, "on the vascular appearances in the human stomach, *which is often mistaken for inflammation of that organ*. Dr. Beck has given us an abstract of a portion of this essay. We repeat, we scarcely know a more important contribution to science than this by Dr. Yelloly, and will readily be excused for enriching our pages with a short extract.

"*The vascularity of the human stomach after death* may lead to error unless properly observed. I have already mentioned a remark of Baillou on this point, and we are further indebted to Dr. Yelloly for some instructive observations on it. This distinguished physician examined the stomachs of twenty individuals, among which number were five criminals, who were hanged, and in whom therefore the appearances of health were likely to be found. Not one of the whole number had any affection of the stomach while living. In all he observed a highly vascular state of the villous coat of the stomach, in particular parts, (as about the pylorus and cardia,) with but two exceptions; in one of these, no vascularity was observed, and in the other it was obscure. In the five executed criminals, the vascularity amounted to a red or crimson hue. These appearances

were distinct for a short time only after death, being most marked on the first day, and soon after, but at irregular periods, becoming more obscure. Dr. Yelloly infers, from these dissections, 'that in the villous coat of the stomach, appearances of vascular fulness, whether florid or dark coloured, in distinct vessels, or in extravasations of different sizes, are not to be regarded as unequivocal marks of disease. They occur in every variety of degree and character, under every circumstance of previous indisposition, and in situations where the most healthy aspect of an organ might be fairly inferred. They are found in every part of the stomach, but principally in the posterior part of the great end, and in the lesser curvature, and they cover spaces of various extent, but are generally well defined and terminate abruptly.' He also supposes that this vascularity is confined to the adult stomach, and is but seldom seen in young subjects.

"If we compare this statement with the appearances mentioned by Dr. Baillie, we shall readily see the danger of falling into mistakes on this point. Ordinary inflammation he characterises thus. 'The stomach, upon the outside at the inflamed part, shows a greater number of smaller vessels than usual, but frequently not much crowded. In opening into the stomach, it is found to be a little thicker, at the inflamed part, the inner membrane is very red from the number of small florid vessels, and there are frequently spots of extravasated blood.'

"But, 'when arsenic has been swallowed, the stomach is affected with a most intense degree of inflammation. Its substance becomes thicker, and in opening into its cavity, there is a very great degree of redness in the inner membrane, arising partly from the very great number of minute vessels and partly from extravasated blood. Portions of the inner membrane are sometimes destroyed, from the violent action that has taken place in consequence of the immediate application of the poison. I have also seen a thin layer of the coagulable lymph thrown out upon a portion of the inner surface of the stomach. Most commonly too, some portion of the arsenic is to be seen in form of a white powder, lying upon different portions of the inner membrane.'

"If we separate the ordinary, from the occasional appearances here described, we shall find, that the statements of Dr. Yelloly and Dr. Baillie in some measure correspond: the former has however suggested, that when coagulable lymph is thrown out in the substance, or on the surface of the villous coat, it is to be deemed an unequivocal indication of previous inflammation. But this is a rare occurrence in dissections, and it may be also, that thick mucus will sometimes assume the appearance of coagulable lymph. Certainly there is a danger of confounding the ordinary vascularity of the stomach, with the indications of *slight* inflammation, *and such indeed as we may expect to find in many cases of poisoning.*"

We trust our readers will be able to form an idea of the object and execution of this work, from our imperfect enumeration of its contents.

BIOGRAPHY.

Biographical Notice *of the late* Cornelius William Van Den Heuvel, M. D. *of Schenectady, New-York.* By T. Romeyn Beck, M. D. of Albany.

The learned foreigner, who is the subject of the present article, resided some years in this State, and held an important situation in one of its literary institutions. At an early age, however, and just when his talents and acquirements were developing to the public view, he descended to the grave. A brief memorial of his life, under these circumstances, cannot prove uninteresting.

Dr. Van Den Heuvel was a native of the town of Vlaardingen, in South Holland. This place is situated on the Maese, and is distant about seven or eight miles from Delft, and six from Rotterdam.

The family of Dr. V. D. H. was respectable and extensive. Different branches of it were, and probably are still, resident in the provinces of Guilderland, Holland, and Utrecht. His father was a wealthy merchant, who, having once filled the highest office in Vlaardingen, that of Burgomaster, remained afterwards, according to the custom of Dutch cities, one of its presiding magistrates. Having passed his childhood in his native place, Van Den Heuvel was sent, at the age of about eleven or twelve, to the Latin school in the city of Delft, where he pursued classical studies for six years. At the expiration of this period, he repaired to the University of Leyden, and devoted himself to the study of the medical profession. He had not long resided there, before he obtained the friendship of Dr. Peter Van Schelle, an eminent scholar and highly respected physician. He also, within a short time, became an

intimate associate of John Theodore Van Der Kemp, then a captain of the dragoon guards in the Dutch service, and afterwards a graduate in medicine of the University of Edinburgh. By the latter gentleman, Van Den Heuvel was introduced to Dr. Francis A. Van Der Kemp, now of Oldenbarneveld, in this State. "The first impression," says this learned and venerable individual, "of his awkward appearance, was soon entirely effaced by his literary acquirements, increasing day by day by his unrelenting and indefatigable exertions. He was soon distinguished by his instructors; and was considered by a Van Doveren, Sandifort, and Voltelen, as one who would enhance the merit of this useful profession, and contribute to the glory of his country. He was certainly indebted in part, for that opinion of his future prospects, to his ardent but unbiassed friends Van Der Kemp and Van Schelle, but chiefly so, to his own merits in every branch of physic."

The Inaugural Dissertation, published by Dr. Van Den Heuvel on graduating as Doctor of Medicine at Leyden, is of a magnitude sufficient to startle the young aspirant after professional honours. It consists of an octavo volume of 428 pages, and is dedicated to his father, in the most affectionate terms. The subject of it is a new Nosological Arrangement of Diseases, founded on the "*vitio vis vitalis*," as he styles it; and the general rule which appears to have guided him, was to select the leading feature in the affection, and to classify it accordingly. This he calls the *principium morbi*, and thus discards the unphilosophical term of the "proximate cause." The accessary characters, which make up the remaining history of the disease, he conceives, are founded on it; and their conjunction in this way appeared to him as altogether forming a system well calculated for practical purposes, and eminently qualified for teaching the diagnosis, prognosis, and cure of diseases. The general divisions proposed by him are as follows:

1. Diseases from defect in cohesion, either greater or less than what is natural.

2. Diseases from defect in the vital power.

3. Diseases arising from some irritating cause introduced, as poisons.

4. Diseases arising from defects in the solids merely as instruments, as deformities, malformations, &c.

5. Diseases arising from defects in the fluids merely as instruments, as plethora, deposition of humours, &c.

The greater part of the volume, however, is occupied in considering the second class, and he has certainly brought into it a great mass of information relating to the history of diseases. He subdivides it into five orders: diseases accompanied with increased irritability—with increased impetus of the vital power—with diminished irritability—with diminished or destroyed impetus of the vital power—and lastly, diseases arising from some anomalous action of the vital power, either producing peculiar affections not referrible to the previous orders, or exciting a morbid secretion which characterizes the individual complaint. Fevers are arranged under the second order, together with inflammations generally; while in the fifth, or anomalous class, the exanthemata of Cullen, with hydrophobia, lepra, pellagra, cancer, syphilis, &c. are placed. All these are again subdivided into species, their peculiarities noted, and their important characteristics brought together, in a masterly manner.

Whatever may be thought of this arrangement, it will at least be allowed that its developement evidences talent, while its preparation must have rendered him familiar with the history of disease, and thus fitted him for contending successfully with it in after life.*

On leaving the University, which was probably about the year 1785, Van Den Heuvel's thirst for knowledge led him to

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* The writer has never met with any notice of Dr. Van Den Heuvel's Nosology, except in the Edinburgh Medical and Surgical Journal, vol. IX. p. 242., where his name is quoted from Pinel's "*Nosographie Philosophique*," with other authors on this subject. The title of Dr. Van Den Heuvel's Dissertation is as follows: "*Tentamen Nosologicum sistens morborum a vitio vis vitalis divisionem, et dispositionem practicam, a maxime fundamentali morborum parte, quantum per abditam multorum naturam licuit, desumptam*," &c.

visit foreign countries. He repaired, in succession, to London, Edinburgh, and Glasgow; and after enjoying the benefit of instruction in these places, he crossed the channel, and proceeded to Paris. Here he attended the medical, surgical, and botanical lectures for about six months; and finally, with the same object, completed his scientific tour, by travelling to Vienna. Before his return home, however, he, in company with a single friend, performed a pedestrian tour over Switzerland, for the purpose of collecting plants, and of visiting the learned men of that country.

After an absence of two years, he returned to his father's house, enriched with all the stores of knowledge, that a course of observation, so well devised, could afford. He appears also to have married about this time; and thus, after a youth employed in every thing that promised to raise him to a high rank in the profession, he was on the eve of fulfilling the sanguine and just anticipations of his friends. But he found his country a prey to civil confusion, and the ardour of his mind soon led him to take an active part in the struggles then making. He was a republican; and when the party to which he was attached proved unsuccessful, was obliged to leave his native land. This was in 1787. He hastened to France, and was cordially received at the Castle of Watte, by Col. A. G. Mappa (now of this State) and other distinguished patriots.

The period of his residence in France was about three years. His friends Col. Mappa, and Dr. F. A. Van Der Kemp, had already crossed the Atlantic, and found an asylum in the United States. Thither he resolved to follow them. He landed at Baltimore, and while there, made several botanical excursions in its vicinity. He prepared descriptions and drawings of the new plants which he had noticed, and these were subsequently seen by several of his friends. The first permanent residence that he determined on, was in the State of New-Jersey; but after continuing in it about a year, he removed to he city of Schenectady, and entered into a medical partnership with the late Dr. Van Ingen of that place. Here his talents soon attracted the notice they deserved. His medical

skill became a subject of general attention, and his reputation extended throughout the country. Pursuing his profession with rapid and increasing success, his scientific acquirements could not fail of also becoming known. In 1795, the academy at Schenectady had obtained a collegiate charter, under the name of "Union College." The distinguished John Blair Smith, D. D. of Pennsylvania, was its first President, and in selecting its subordinate officers, Dr. Van Den Heuvel was appointed its first Professor of Mathematics and Natural Philosophy. He accepted the office in 1798, and entered on its duties with the ardour so characteristic of him. Although labouring under the disadvantage of an imperfect knowledge of the English language, and conveying his ideas in an idiom which seems of all others to be preferred as a theme of ridicule, he still gained on the esteem of the trustees and the affections of his pupils. His knowledge was so extensive, and his acquaintance with modern discoveries so complete, that he could not fail of attracting attention, and inspiring respect. But after performing the duties of his station for one year, he was seized with a febrile disease, and after lingering for some time, at last fell a victim to it. He died in 1800, aged probably thirty-eight or thirty-nine years.*

The brief narrative now given, is pregnant with many interesting, as well as melancholy reflections. It presents a morning, without a cloud, but a noon-day, dark and overshadowed. Those convulsive struggles which Europe has experienced for the last forty years, drew the subject of this sketch within their influence, and he, who with certainty could look forward to scientific and political distinction in his native country, was through their means driven from it an exile and a wanderer. In this country he was received and cherished by the descendants of former emigrants from the

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* In the "*Catalogus Senatus Academici in Collegio Concordiæ, &c.* 1819," he is stiled LL. D. This is unquestionably a mistake, unless he received that honour in this country. The only collegiate distinction which, it is believed, he obtained, was that of Doctor of Medicine.

"*Father Land;*" but alas, when about repaying that duty which every one owes to the land of his birth or his adoption, his days were numbered, and his services ended. It is vain now to anticipate what he might have done, or accomplished. It is sufficient that while living he endeavoured to excel in those acquirements which dignify the mind of man, exalt its conceptions, and elevate its powers.*

Medical and Philosophical Intelligence.

DOMESTIC.

Medical Society of the State of New-York.—We have just received the Transactions of this Society at its last annual meeting, and shall briefly notice some of its more important proceedings. The Society met, according to the statute of the State, at the Capitol in the city of Albany, on the 3d of February, 1824. The following gentlemen took their seats as Delegates from their respective County Societies, viz.

Dr. Alexander Coventry, Oneida, *President.*
— John H. Steel, Saratoga, *Vice President.*
— Charles D. Townsend, Albany, *Secretary.*
— Jonathan Eights, Albany, *Treasurer.*
— Laurens Hull, Oneida.
— T. Romeyn Beck, Albany.
— William Bay, do.
— Peter Wendell, do.
— Henry L. Van Dyck, Columbia
— Truman B. Hicks, Warren.
— Henry Van Hovenburgh, Ulster.
— Daniel Ayres, Montgomery.
— Erastus D. Tuttle, Cayuga.
Dr. Gamaliel H. Barstow, Tioga.
— Abram Allen, Washington.
— E. Wallace, Westchester.
— Cornelius H. Van Dyck, Schoharie.
— Stephen Todd, Herkimer.
— James R. Manley, New-York.
— John B. Beck, College of Physicians and Surgeons, New-York.
— Ralph P. Allen, Clinton.
— Thomas Spencer, Madison.
— Royal Ross, Chenango.
— John L. Cleveland, Yates.
— Horatio Orvis, Jefferson.
— Eliel T. Foote, Chautauque.
— John Van Name, Rensselaer.
— Amos Botsford, Greene.

* For many of the facts contained in this imperfect sketch, the writer is indebted to the kindness of Col. A. G. Mappa, and Dr. F. A. Van Der Kemp.

Among other subjects of importance submitted to the consideration of the Society, we look upon the establishment of annual prize questions, as not the least interesting. The questions for the present year are—

1. *The History, Causes, and Treatment of Whooping Cough.*
2. *The remote and exciting Causes of Phthisis Pulmonalis.*

The following regulations were at the same time adopted by the Society:

1. That in treating of the diseases mentioned above, it be required that particular attention be paid to their history, nature, and causes, in this state.
2. That the prize offered be in each case *fifty dollars.*
3. That the Secretary give public notice of the subjects offered, on or before the 1st of March next.
4. That the Dissertations offered for premiums be forwarded to Albany, on or before the 1st of January, 1825. That they be accompanied with a sealed paper, containing the name of the author, and that this sealed paper, as well as the Dissertation, be endorsed with the same motto, in order that the name of the successful author alone may be ascertained.
5. That ———————— be a committee to examine and report on the Dissertations that may be presented.
6. That it be understood, that the Society is at liberty to dispense with the adjudication of any premiums, provided the Dissertations presented to the committee may not by them be deemed worthy.

Several applications for the incorporation of additional Medical Colleges in this State having been presented to the Regents during their present session, we are much gratified to find that the Society turned its attention to this important subject, and adopted the following resolution, viz.

"*Resolved*, That in the opinion of this Society, the increase of Medical Colleges in this State is not required for the public good, and that it would be decidedly injurious to the best interests of the profession at present, to charter any additional medical schools."

This resolution was transmitted to the Regents, and we are happy to add that, since that time, that honourable body has rejected all the applications made to them. After this very decided expression of opinion on the part both of the Regents and the profession, we sincerely hope that we shall not very speedily have this subject again agitated. We have already two highly respectable Medical Institutions in this State, abundantly sufficient, we conceive, for all our wants. If we wish them to maintain the character which they have at present acquired, we shall be extremely cautious how we increase their number.

The following are the officers for the ensuing year:

Dr. Alexander Coventry, Oneida, *President.*
— John H. Steel, Saratoga, *Vice President.*
— Charles D. Townsend, Albany, *Secretary.*
— Jonathan Eights, do. *Treasurer.*

Censors.

Dr. Felix Pascalis,	Southern District.
— James R. Manley,	
— Charles Drake,	
— William Bay,	Middle District.
— T. Romeyn Beck,	
— Peter Wendell,	
— Abram Allen,	Eastern District.
— Daniel Ayres,	
— Truman B. Hicks,	
— Laurens Hull,	Western District.
— E. D. Tuttle,	
— Luther Guiteau,	

Memoirs *of the* Board of Agriculture *of the State of New-York.* Vol. II.

This volume has been published during the past year, and contains many valuable papers relating to theoretical and practical Agriculture. Those which we consider most interesting, are, a "Geological and agricultural survey of Rensselaer County," and a "Report of the Geological Structure of the County of Saratoga." The latter is the production of Dr. John H. Steel, who also presents to us in this volume an account of the mineral waters of the county of Saratoga. In both these papers, the author furnishes evidence not only of persevering industry, but of scientific acquirements. The survey of Rensselaer county was made by Professor Eaton, under the direction and at the expense of the Hon. Stephen Van Rensselaer. It reflects the highest honour upon this distinguished individual, whose zeal to advance the interests of science is only equalled by his munificence. It is with great pleasure that we mention, that not content with the scientific examination of two large and populous counties, a geological and agricultural survey of the country bordering on the Western Canal, from Albany to Buffalo, has been commenced under his patronage, and at his expense, and will be completed during the ensuing summer. These facts deserve to be recorded, inasmuch as they furnish examples as rare as they are splendid, of private wealth contributing to the advancement of science, and the promotion of the public good.

This volume also contains a valuable treatise upon gardening, by J. Armstrong of Dutchess county, with numerous other papers upon the management of live stock, the cultivation of fruit-trees and grapes, upon kitchen gardening, &c., which must be highly interesting to the agricultural part of the community. We cannot omit mentioning, that among these are several communications from Mr. G. W. Featherstonhaugh of Duanes-

burgh, and Mr. Jesse Buel of Albany, gentlemen whose zeal and activity have in a great degree identified them with the institution by which this volume is published. Our limits forbid a more detailed notice of this interesting work; but we cannot conclude this brief notice, without recommending its attentive perusal to all those who are in any way engaged in agricultural pursuits, nor without expressing a hope that the Legislature will make an ample appropriation for the support of an establishment, which, in the present publication, furnishes the most satisfactory evidence of its increasing usefulness.

UNIVERSITY OF THE STATE OF NEW-YORK.

Graduates of the Doctorate in Medicine of the College of Physicians and Surgeons in the City of New-York. April 1824.

NOVA SCOTIA.

1. William B. Webster, *on the Hip Joint.*

MASSACHUSETTS.

2. Clarke Wright, *on the Digestive Organs.*

RHODE ISLAND.

3. James D. Peckham, *on Dysentery.*

NEW-YORK.

4. Augustus A. Adee, A. B. *on Gun Shot Wounds.*
5. Henry I. Anderson, A. M. *on the Laws of Chemical Combination.*
6. De Witt Birch, *on Diarrhœa.*
7. Cornelius R. Bogart, *on Anthrax.*
8. John Cole, *on Infantile Remittent Fever.*
9. Edward C. Cooper, *on the Absorbents.*
10. John Clapp, *on Dysentery.*
11. Amos W. Gates, *on the Influence of the Mind on Diseases.*
12. Rensselaer Gansevoort, A. B. *on Leprosy.*
13. William A. Hunter, *on the Mind and Body.*
14. Frederick G. King, A. B. *on the Nervous System as known to the Ancients.*
15. Howard Lee, *on Opium.*
16. William S. Lobdell, *on the Modus Operandi of Medicines.*
17. Philip E. Milledoller, A. B. *on Empiricism.*
18. Washington Murray, A. M. *on the Morbus Coxarius.*
19. Robert Maclay, *on Anatomy.*
20. John R. Rhinelander, *on Typhus Fever.*
21. Giles M. Richards, *on Diabetes.*
22. Archelaus G. Smith, *on Morbid Sympathies.*
23. Richard T. Underhill, *on Sulphate of Quinine.*

24. George Wilkes, A. B. *on Diabetes.*
25. Abraham V. Williams, *on the Absorbents.*

NEW-JERSEY.

26. Joseph C. Arnold, *on Hereditary Diseases.*
27. George R. Chetwood, *on Trachitis.*
28. Joseph B. Jackson, *on Hernia.*
29. John A. Pool, *on Urethritis.*
30. Hatfield Smith, *on Compound Fractures.*

PENNSYLVANIA.

31. Samuel Carey, *on Intermittent Fever.*

DELAWARE.

32. James S. Rumsey, A. B. *on Dyspeptic Phthisis.*

VIRGINIA.

33. La Fayette Brown, *on the Magnolia Glauca.*
34. Rolling Jones, *on the Influence of the Mind.*

NORTH CAROLINA.

35. Hugh Ferriar, *on Disease.*
36. Bucknor Hill, *on Angina Pectoris.*
37. William R. Minor, *on Marsh Miasmata.*

SOUTH CAROLINA.

38. Charles F. Godbold, A. B. *on Phlegmasia Dolens.*
39. Robert M. Gourdine, A. B. *on Cantharides.*
40. William S. Johnson, *on Hepatitis.*
41. Frederic B. Tudor, *on the Physionomy of Disease.*
42. J. S. McLeod, *on Otitis.*

OHIO.

43. Jonathan J. Tod, *on Puerperal Fever.*

MISSISSIPPI.

44. George C. Ferguson, *on the Humulus Lupulus.*

College of Physicians and Surgeons of the Western District, New-York.

From the circular of this institution it appears that the number of students, during the past session, amounted to ninety-six. The degree of Doctor of Medicine has been conferred on the following young gentlemen.

1. John R. Brown, *on the Nervous System.*
2. John B. Crouse, *on the Causes of Disease.*
3. Daniel Ely, *on Perspiration.*
4. Isaac Freeman, *on Sulphureous Waters.*
5. James F. Johnson, *on the Diarrhœa of the army at Sackett's Harbour in* 1814.
6. Benjamin Miller, *on Dysentery.*
7. William M. Weber, *on the Modus Operandi of Medicines.*
8. Menzo White, *on Coxalgia.*

Larrey's Essays.—A volume of Surgical Essays, from the French of the distinguished Baron Larrey, has lately been published by Dr. Revere of Baltimore. Our readers may remember the valuable Memoirs of Military Surgery drawn up by the Baron, which made their appearance in 1815 in an English dress, from the pen of Professor Hall of the University of Maryland. The present work, by Dr. Revere, embraces several highly interesting essays. The first, that on the use of the Moxa is the most elaborate. The titles of the other papers are, on the Seat and Effects of Nostalgia; on the Properties of the Iris; some Observations on Wounds of the Intestines; on Fractures of the Neck of the Femur; and lastly, on Wounds of the Bladder.

Wistar's Anatomy.—A new edition of this very valuable work has just appeared, enriched with many additions by Dr. Horner, adjunct Professor of Anatomy in the University of Pennsylvania.

The *Elements of Physiology*, by *Richerand*, have also been published at Philadelphia. This edition is from the translation by De Lys, and includes the Notes which formerly were made by Professor Chapman. The translation is stated to be corrected, and the late improvements in the science are added by Dr. Godman, Lecturer on Anatomy and Physiology.

Neuralgia.—An interesting case of this painful affection, which had existed for twelve years, and resisted the numerous means that had been adopted for its removal, has lately yielded to the remedial powers of the carbonate of iron. The patient was a female aged about forty-six. We expect the particulars of the case drawn up by her physician, Dr. McLean of this city.

New Galvanic Apparatus.—Dr. Greenhow, a young chemist of this city, has recently invented a new form of the Galvanic apparatus, which has been pronounced, by scientific gentlemen, to possess many striking and important advantages over all others hitherto used. We are promised a detailed account of it for our next number.

FOREIGN.

Effects of Iodine in Scrofulous Affections.—Mr. Delisser, of 55, Judd Street, Brunswick Square, London, Extraordinary Vaccinator to the National Vaccine Establishment, has sent to us an account of several cases, in which he used various preparations of iodine with good effect. A young unmarried woman of 19, had been affected, for 2½ years, with a scrofulous swelling of the knee, and contraction of the joint. After leeching, a liniment of one drachm and a half of iodine, dissolved and diffused through an

ounce and a half of rectified spirit of wine, was ordered to be rubbed on the knee twice a day, for an hour each time. In ten days, the proportion of iodine was increased to two drachms to the same quantity of spirit. The knee was perfectly restored to its healthy state in about a month after the frictions with iodine were commenced ; but, to confirm the cure, a plaster of half an ounce of iodine, with an ounce of strengthening plaster, was applied. The liniment smarted the leech-bites when recent (probably from the alcohol it contained,) but afterwards excited no eruption, redness, or heat. The only obvious effect was pain in the œsophagus, and if the thyroid, or cricoid cartilages were pressed, of soreness along the throat, and constant dryness of the glottis ; and Mr. D. observes, that every patient with whom he has used iodine, has made the same complaints.

The next patient was a child three years of age, born of highly scrofulous parents, and itself affected in an extreme degree. The iodine was given internally. One drachm was dissolved in ten drachms of spirits ; and of this tincture, 15 drops were made into a mixture, with half an ounce of gum arabic, and as much anise water, and taken daily in three equal portions. On the 11th day the daily dose was increased to 30 drops, on the 21st to 60, on the 45th to 75, and a fortnight afterwards it was discontinued. The child recovered completely, having taken 222 grains of iodine in less than two months.

The third case was one of a lady with scirrhous breast, for which amputation was prescribed. On the 19th of June she began to take a pill, containing one grain of iodine, and two of hemlock powder, three times a day. The doses of the medicines were gradually increased until about the 22d of July, when she began to take 30 grains of iodine, and 18 of hemlock, every 24 hours, which large dose was continued until August 1st. Her appetite then failed ; the pulse, which on the 17th June was 70, rose to 130 ; her mouth fell into a sort of ulceration, with fetid breath, differing, however, from that caused by mercury, and, if possible, more disagreeable ; but her complaints were little relieved, and the medicines were discontinued. On the 9th, the symptoms ascribed to it had entirely disappeared. Its use was resumed on the 9th, to the extent of 30 grains daily ; but on the 20th, all the former symptoms returning, and the patient having derived no benefit from it, it was finally abandoned. This lady took in all, between the 19th of June and the 20th of August, 1019 grains, being the largest quantity of iodine ever taken by any individual.

These trials, so far as they go, confirm the observations of Dr. Coindet senior, on the specific virtues of iodine in scrofula, while they show that it is inadequate to the removal of true scirrhus. We have preferred giving this brief account of Mr. Delisser's communication to withholding the detail for a future Number, that others may be induced to make trial of it in one of our most common and intractable diseases. At the same time, we must caution our readers, that the doses given by Mr. Delisser are much larger than those given by Dr. Coindet. His tincture was made with *one*

part of iodine to *twelve* of spirit; and in this form he never gave more than 20 drops three times a day, or six grains of iodine (72 to the drachm,) daily; and two ounces of the tincture, or 96 grains of iodine were considered an ample quantity for a full course of the medicine, and sufficient to remove the most obstinate goître. We should also caution our contributors, that on account of its insolubility, the form of pill is the least eligible; and that the iodine itself is very inferior to some of its combinations, both in efficacy and in convenience.—*Edin. Med. and Surg. Journal, Jan.* 1824.

Case of Elongation of the Uvula, producing Symptoms of Chronic Pneumonia.—Madame G—, aged thirty, born of healthy parents, had suffered no severe illness from her infancy, when, in the month of January 1822, she became affected with slight cough, to which she at first paid little attention, attributing it to the dampness of the atmosphere and her exposure to cold. This lady was the mother of two children, who were exempt from disease, although of a scrofulous constitution. Nothing announced a predisposition to chronic disease of the respiratory organs; nevertheless, her cough gradually increased till the month of April, when her ordinary medical attendant was consulted. He prescribed various pectoral remedies, without avail: the cough made new progress, and, in the month of August, Madame G, was supposed to be affected with chronic inflammation of the lungs, accompanied with tubercles already developed. Various active means were had recourse to, calculated to retard the progress of the disorganization.

M. Cuynat was called in on the 20th of December, 1822, when he observed the following symptoms:—the respiration was constrained, and there existed considerable constriction of the chest, within the cavity of which were felt sharp flying pains, which were increased during the cough and full inspiration. The patient made continual efforts either to swallow or to expel the mucus of the throat; a fixed pain, accompanied with tickling, existed in the larynx; the appetite was almost gone; the tongue was sometimes white, and sometimes natural; the countenance pale; emaciation extreme. The languor both of body and mind of Madame G. seemed to announce the profound lesion of some important organ. The chest, however, examined with much care was sufficiently sonorous at every part, except the upper, where the sound appeared rather dull. The pulse was sometimes small and unequal, and at others full and frequent; it often passed from one of these states to the other in the space of half an hour. Having examined the fauces, M. Cuynat observed that the uvula was elongated, and rested on the root of the tongue, being the seat of a serous enlargement; and he conceived that all the evils experienced by the patient arose from this cause. He discontinued the use of all internal remedies, and proposed the removal of the superabundant portion of the uvula, as the only means of getting rid of the symptoms. This being agreed upon, the operation was performed on the following day.

The patient was seated opposite a window, with the head supported against the chest of an assistant, and the jaws were kept apart by a roll of linen placed between the molar teeth. The operator then laid hold of the uvula with a pincers, and, pulling it gently, cut off a sufficiently large portion with a blunt-pointed bistoury. No considerable bleeding followed the operation, which was attended with little pain ; and the wound was healed under the use of a gargle made of wine and honey, which restored its natural tone to the velum of the palate. The lady entirely recovered.—*Revue Médicale*, September.

Obliteration of the Œsophagus, in consequence of Inflammation.—A young man, aged twenty-four years, was admitted into the Hotel Dieu at Lyons, having swallowed a glass of aquafortis two years previously. He escaped from the first symptoms, which were violent, but a degree of inflammation remained in the pharynx and œsophagus, which prevented him for a long time from being able to swallow any thing except a little milk and water. The power of swallowing was afterwards lost, and the fluid could only be carried into the stomach by means of a hollow bougie ; a still more complete stricture of the œsophagus did not permit even the sound to pass. In this state the patient presented himself to M. Dupuy, on the 18th of May, 1822. The impossibility of introducing food into the stomach induced him to have recourse to nutritive enemata of soup. The unfortunate patient, tormented by hunger which could not be appeased, was wretchedly emaciated, and affected with violent fever : his eyes were sunk, his tongue red, his belly retracted, and he had continual hiccough. At last, on the 28th, he died of inanition, in the most acute anguish. On opening the body, the œsophagus was found completely obliterated for four inches at its inferior extremity ; the stomach was slightly inflamed.—It is suggested that, if it had been possible to have left the sound in the œsophagus, the power of introducing nourishment might have been retained, and the life of the patient prolonged.—*Bulletins de la Société Medicale d'Emulation de Paris*, Juin.

Chlorine, with Water, employed in the Treatment of Scarlatina.—Dr. Braun, who details the advantages of this remedy, carries his enthusiasm so far as to call it a specific in scarlet fever. During ten years he has employed it successfully in the most complicated cases. Chlorine mixed with water, he says, destroys contagion ; and the cure is seldom followed by any consecutive disease. He gives this medicine in the dose of a tea-spoonful every two or three hours, to children from three to six years of age, and, to those of a more advanced age, a table-spoonful in the same intervals. It is given without the addition of any other medium, as the chlorine is decomposed in most mixtures. It should be swallowed quickly, lest it should produce cough. M. Braun observes, that, in the sore-throat which often accompanies the scarlet fever, this water is more easily swallowed even than

mucilaginous drinks. As soon as the disease begins to decline, he only prescribes the medicine in the dose of one or two spoonsful in the day. The whole quantity taken during the disease has never exceeded two ounces in the cases of children, and four or five ounces in those of adults. If this medicine is given in greater doses, it brings on vomiting and frequent alvine evacuations: if it is not fresh, or has been exposed to the atmospheric air, it produces slight excoriations of the lips. M. Hufeland had already recommended this remedy in nervous and typhus fevers.—*Revue Medicale*, Juillet.

Case of Chronic Hydrocephalus in an Adult Female.—In one of the late Numbers of Hufeland's Journal, the case of a female, aged eighteen years, is detailed, who died of hydrocephalus, under which she had laboured during fifteen years. The dissection of her head presented the cranium almost completely ossified: it was only slightly transparent in the situation of the fontanells. The circumference of her head was twenty-six inches and a half; the antero-posterior diameter was ten inches and a half; the transverse diameter eight and a half; the vertical diameter eight and three-fourths; the oblique diameter thirteen inches and three-fourths; and the whole length of the body was fifty-four inches and a half. Between the brain and its meninges, about twenty ounces of a yellowish fluid were found. The brain itself, in which could no longer be detected the usual anatomical disposition of parts, and which offered more the appearance of a kind of pulpy sac than a natural brain, contained about nine ounces of a similar fluid.

The aqueous accumulation extended also to the spinal column, forming the complication of hydrocephalus with dropsy of the spine. The vertebral column was inspected, and the spinal chord found only to fill half the canal; above two ounces of fluid escaped on opening it. Although the patient had sustained this disease for fifteen years, she enjoyed notwithstanding, until the two last months of her life, all her faculties. Her catamenia were always regular, and even abundant.—*London Medical Repository.*

Case of Intus-Susception, followed by the Evacuation, per anum, of about 30 inches of Small Intestine and a Portion of Mesentery. By MM. Bouniol and Rigal fils.—At a late meeting of the *Académie Royale de Médecine*, M. Larrey read a report, in his name, and in that of MM. Roux and Béclard, on a case under the above title. The individual who was the subject of it had laboured under violent dyspepsia, after which he was attacked with every symptom announcing internal strangulation, such as complete suppression of the alvine evacuations, vomiting of fæcal matter, hiccup, and severe pain of the abdomen, with an elevated tumour, very sensible to the touch, in the right iliac region. At the end of twelve days, after violent pain in the bowels, the portion of intestine above mentioned was evacuated per anum. From this time the patient rapidly improved, a painful sensa-

tion in the right iliac region being the only inconvenience remaining. At the end of about three months, this individual, after having eaten a large quantity of cherries, was attacked with symptoms of peritonitis, and died. Permission could not be obtained to open the body. The preparation sent to the *Academie* certainly resembled, in every respect, a portion of intestine and mesentery. M. Larrey supposes, what is indeed the only rational supposition, that a portion of intestine, invaginated, strangulated, and struck with gangrene, had become separated from the living tissues, and had entered into the great intestine, whence it had been evacuated. By a successful effort of nature, both ends of the living intestine, coming in contact, had reunited.—*Revue Medicale*, Août, 1823.

Efficacy of the Chloruret of Lime as a disinfecting Agent.—Messrs. Orfila, Lesueur, Gerdy, and Hennelle, having been requested by the *Procureur du Roi* to examine the body of an individual who was supposed to have been poisoned, and who had been dead for nearly a month, found the smell so insupportable, that they were induced to try the application of the chloruret of lime, as recommended by M. Labarraque in the pamphlet to which we had occasion to refer in our last Number. A solution of this substance was frequently sprinkled over the body, and produced quite a marvellous effect; for scarcely had they made a few aspersions, when the unpleasant odour was instantly destroyed, and the operation could be proceeded in with comparative comfort.—*Archives Générales de Médecine*, Août, 1823.

On the Exhalation of Carbonic Acid during Respiration. By Dr. Edwards.—This eminent physiologist has communicated to the French Institute the result of numerous experiments which he has made respecting the exhalation of carbonic acid during expiration. He proves that carbonic acid does not form instantaneously in the lungs through the action of the respired air, but that it is secreted from the blood in the respiratory organs. Dr. Edwards placed some cold-blooded animals in perfectly pure hydrogen. The respiration was kept up for several hours in atmospheric air; and he discovered, after this lapse of time, the presence of a quantity of carbonic acid, nearly equal to that which would have been effected in atmospheric air.—*Revue Medicale*, Août, 1823.

On the Transmission of Contagious Principles, from the Lower Animals to the Human Species. By Professor Remer, of Breslau.—One great question in pathology is to ascertain if Hydrophobia and Vaccinia are the only maladies which may be transmitted from the lower animals to man: or if a similar transmission may likewise take place in other diseases to which animals are subject; and in the latter case, what are these diseases? In order to solve this question, M. Remer adduces a number of facts, which prove, in a very conclusive manner, that certain other disorders, such as the viru-

lent coryza of horses, the plica of animals covered with hair, the gangrenous inflammation of the spleen, which occurs in cows, &c. may, from immediate contact, be transmitted from the animal to the human species, and there give rise to diseases entirely resembling those which gave them origin.—*Archives Génér. Sept.* 1823.

On the Direct Passage of Substances into the Blood. (*Journal Complementaire, &c., Septembre* 1823, xvi. 235.)—Although the frequently repeated experiments of Flandrin, Magendie, Mayer, Gmelin and Tiedemann, leave little doubt as to the direct passage of many substances into the venous system, it gives us additional pleasure to notice a farther confirmation of them by a skilful physiologist, M. Westrumb of Hamelin. His experiments are the following. The sulphuretted hydrocyanate of potass, indigo, rhubarb, oil of turpentine, were injected into the stomachs of dogs and sheep: and after various intervals of time, the animals were killed and carefully examined. When a mixture of indigo and oil of turpentine had been used, and the animal was killed 5 hours after the beginning of the experiment, the two substances were plainly manifested to the sight and smell in the whole tract of the intestines, as well as in the blood of the vena portæ, in the substances of the lungs, liver, and kidney, and in the urine; but not a vestige could be recognised in the glands of the mesentery, or in the chyle. The oil of turpentine and the hydrocyanate of potass were given to a sheep in repeated doses during four days, and it was killed half an hour after the last dose. Neither of these easily detected substances could be found in the lymphatic vessels or glands of the mesentery, or in the thoracic duct; but both of them were very obvious in the liver, kidney, spleen, and blood of the vena portæ. Similar results were obtained with the decoction of rhubarb, and the sulphuretted hydrocyanate of potass. Tying the thoracic duct near its termination did not alter the phenomena. The researches of Westrumb likewise confirm those of former experimenters as to the extreme rapidity of the venous absorption. He detected rhubarb in his own urine five minutes after swallowing an ounce of its infusion; and after the same period in rabbits, but not earlier. Half a grain of the hydrocyanate of potass given to a little dog, became sensible in the urine *at the end of two minutes.*

A new Remedy for excessive Salivation.—Dr. Kruger-Hausen, of Gostrow, has given an account of a man who, during a state of excessive salivation, attended with hemorrhage from the gums, had employed the usual astringent gargles without benefit, who afterwards covered his tongue and inside of his mouth and fauces with tar, by means of a brush. He soon afterwards recovered, without any other remedy. Dr. K. has since employed the same means in several cases, with the effect of quickly removing this disagreeable consequence of medical treatment, without any inconvenience resulting from this new method.—*Rev. Med.* Juillet 1823.

I. *Experiments on the Therapeutical Properties of Strychnine.* By M. Andral, *fils.*—The strychnine which M. Andral exhibited in the following cases was as pure as could be obtained, and was entirely deprived of brucine (see the subsequent experiments with this substance), to which it remained united in the preparations which M. Pelletier first made of it. It was given in the form of pills, some containing the twelfth part of a grain, others the sixth of a grain.

Case 1*st.*—A house-painter, after having been several times affected with colic, was attacked with that variety of paralysis to which this class of mechanics are subject, and which consists in a great weakness of the extensor muscles of the hand. The paralysis had been ineffectually treated by stimulating frictions on the fore-arm. This individual took on the first day a pill, night and morning, each containing half a grain of this alkali. He experienced a painful trembling in the extensor muscles. On the three following days the same dose was attended with like effects. Four pills of the same strength were given on the fifth, sixth, and seventh days, two night and morning. The effects were slight shaking of the limbs, spasmodic contraction of the extensors of the fingers, and a diminution of the paralysis. Pills of one-sixth of a grain each were then given, commencing with one, and afterwards increasing them to four at the end of eight days. During this time he experienced violent shocks. He soon left the hospital (La Charité), only retaining a slight weakness in his hands.

Case 2*d.*—A compounder of colours was affected with a similar form and degree of disease to the preceding. A single pill, containing one-twelfth of a grain, occasioned slight trismus, and incipient tetanic stiffness in the muscles of the neck, the abdomen, and the limbs. The next day he took another pill, and experienced only some spasmodic contractions in the limbs. At the end of six pills, a pill was prescribed for him, night and morning: violent contractions of both arms took place. The strychnine was continued at this dose for fifteen days; at the end of this time the paralysis had disappeared.

Case 3*d.*—A German, of a strong constitution, who had long laboured under paralysis of the extensors of both hands, from the effects of the preparations of lead, took a pill of one-twelfth of a grain, without feeling any effects from it. At the dose of one-third of a grain, he began to experience some shocks. He took somewhat too speedily a little more than a grain of this alkali: at this dose he experienced such forcible contractions, that it was necessary to reduce it to a grain. This man was not benefited by it. This case, compared with the preceding, shows how much the action of strychnine may vary according to the susceptibility of the subject.

Case 4*th.*—A man accustomed to work in white lead had the same sort

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* The following experiments were made at La Charité, in the wards of M. Lerminier.

of paralysis as the preceding. A pill containing one-twelfth of a grain of strychnine produced in him violent trismus; the next day he took a like quantity, and this time felt no effect. Two pills produced strong shocks in the limbs. In a short time the dose was increased to two-thirds of a grain: this quantity could not be exceeded owing to the supervention of tetanic symptoms. This patient was relieved.

Case 5th.—In a potter, paralysed as the former, the dose of strychnine was raised, in twelve days to one grain. He experienced weak contractions only. When this dose was exceeded, locking of the jaws, and throwing of the head backwards, supervened. Terrified by these unpleasant symptoms, the patient would take no more pills, and left the hospital without being relieved.

Case 6th.—A man was admitted into the hospital with incomplete paralysis, which had been ineffectually treated by blisters, moxas, and cauteries, applied on the lumbar region: there was no deviation of the spine. A pill, consisting of one-twelfth of a grain, did not produce any effect; two pills occasioned slight convulsions of the inferior limbs: they were carried to the extent of four a day (a third of a grain). This dose gave rise to somewhat acute pain in the lumbar region, and at the same time to stiffness in the inferior limbs only, and to notable augmentation of the paraplegia. The strychnine was discontinued.

M. Andral considers the paraplegia in this individual as probably the result of a lesion of the spinal chord, which the strychnine seemed to ag gravate.

Case 7th.—An old man, who had been long affected with complete paraplegia, took three pills of one-twelfth of a grain each, without feeling any effect. Four pills (a third of a grain) caused slight contractions in all the limbs. It was then laid aside.

Case 8th.—A man had remained hemiplegic after an old attack of apoplexy. In him a pill, consisting of one-twelfth of a grain, was sufficient to occasion a strong tetantic stiffness of the paralysed limbs. On the subsequent days this man experienced, although the strychnine was discontinued, violent pains in the head on the side opposite to the hemiplegia. His intellects became confused, and the hemiplegia was increased; in short, he presented several symptoms which characterize softening of the brain. M. Andral asks, "Did the strychnine in this case produce an attack of inflamation around the old apoplectic cyst or cavity?"—*Journal de Physiologie*, Juillet 1823.

The manner of obtaining Brucine adopted by the French Chemists.—Brucine is an organic salifiable base, lately discovered by MM. Pelletier and Caventou, in the bark commonly known by the name of the spurious Angustura; (*Brucea Antidysenterica*, according to some: others consider it the *Strychnos Colubrinum.*) Brucine is white, regularly crystallized in oblique prisms, with a parallelogrammatic base. Its savour is very bitter, slightly acrid, and styptic. It is soluble in five hundred parts of boiling.

and in eight hundred parts of cold water: it is very soluble in alcohol. It forms with acids salts possessing different characters from those presented by strychnine. Brucine is obtained by preparing an alcoholic extract of the spurious Angustura bark; and by dissolving this extract in a quantity of very cold water, and filtering it, in order to separate the fatty matter. The colouring matter is precipitated by the acetate of lead—the excess of lead, by sulphuretted hydrogen—and, lastly, the brucine, by an alkaline base. For this purpose magnesia is advantageously employed. The magnesia precipitate, slightly washed and dried, is treated by alcohol, which dissolves the brucine, which is afterwards obtained by evaporation. As the brucine is but little soluble, the magnesia should not be too much washed. M. Pelletier considers that ten grains of brucine is equal, in its action on the animal economy, to one grain of strychnine; and M. Andral considers that six grains of the former are required to produce the effects of one grain of the latter, if impure, and of a quarter of a grain, if pure.—*Dictionnaire de Médecine*, vols. 2d and 3d; Articles *Angusture*, *Brucine*: and *Journ. de Physiologie*. Juillet 1823.

Experiments on the Medical Properties of Brucine. By M. Andral, *fils.**—The pills of brucine which M. Andral administered to the subjects of the following cases contained each half a grain of this alkali. From experiments which he had made on animals, he was satisfied that no unpleasant effects could result from this dose.

Case 1st.—A mixer of colours laboured for two months under a paralysis of the hands. He took one pill without feeling any effect from it: two pills produced slight shocks in the arms; four pills caused tolerably strong contractions. He was discharged, cured.

Case 2d.—A compounder of colours, affected with a similar paralysis, took as many as four grains (gr. 3. 281 Troy) of brucine without any sensible effect. At the dose of four grains and a half he felt a sort of unpleasant creeping sensation in the arms; and in the dose of five grains (gr. 4. 1. Troy) he experienced somewhat strong shocks, without any serious symptom. The paralysis was remarkably diminished.

Case 3d.—A house-painter, paralysed in both hands, did not begin to experience any shocks until the dose of two grains of the brucine. Three grains caused somewhat strong trismus. The patient was only relieved.

Case 4th.—A worker in lead, and paralysed like the preceding, experienced a tetanic stiffness of all his limbs, after having taken three grains and a half of brucine. He was not relieved.

Case 5th.—A paraplegic subject, after having taken only two grains of brucine, felt a violent pain in the soles of his feet; his lower limbs were the seat of violent contractions. His condition was not improved.

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* These experiments were likewise made at La Charité, in M. Lerminier's wards.

Conclusions drawn from the preceding Experiments with the Strychnine and Brucine.—M. Andral deduces the following corollaries from the comparative trials which he has made with these substances;—

1st. Pure *strychnine* acts upon man like the extract of nux vomica, but with much greater intensity.

2dly. The action of *strychnine* is so energetic, that it ought to be used with the greatest precaution. Its effects, moreover, vary in a remarkable manner, according to the susceptibility of the individual.

3dly. The *brucine* acts upon man as upon animals, although much less energetically than strychnine. It may be advantageously substituted, as a medicine, for the alkali of the nux vomica.

4thly. Considered as regards their therapeutical properties, strychnine and brucine are more or less efficacious, according to the kind of paralysis which we may endeavour to combat with them. When employed in those cases wherein paralysis is connected with an inflammatory state of the brain or marrow, they may, very probably, augment the symptoms. In those subjects who are hemiplegic after cerebral hemorrhage, these alkalies are most commonly useless; and it is even to be feared that they may occasion inflammation of the cerebral substance around the apoplectic *foyer*. But there are cases in which, as if by a sort of habit, the paralysis would seem still to remain after the absorption of the extravasation: such cases may yield to the strychnine or brucine. Lastly, these alkalies seem to be especially efficacious against paralysis, the cause of which cannot be referred to a lesion of the nervous centres; such as, more particularly, the species of paralysis to which individuals are subject who handle the preparations of lead. The preceding cases attest the efficacy of strychnine and brucine in this species of palsy. Of nine cases, six have been cured, or at least relieved. I could also adduce other cases of paralysis of the same kind, which have yielded to the alcoholic extract of nux vomica.—*Journal de Physiologie*, Juillet 1823.

Application of the Stethoscope to the Diagnosis of Fractures. (*Arch. Gén. de Méd. Aout* 1823, ii. 631.)—M. Misfranc, the well-known lecturer on operative surgery at Paris, has completely succeeded in realizing a conjecture started some time ago by Laennec, with regard to the applicability of his stethoscope to the diagnosis of fractures. With the aid of this instrument, he avers that no surgeon can ever remain in doubt as to the existence of a fracture in any part of the body, except the head. The tumefaction around the injury can never be so considerable as to obscure the crepitation entirely; and the slightest possible movements are sufficient to produce the requisite sound. The following general rules have been established by frequent observation, both on the dead and on the living body. 1. The instrument may be applied over the seat of fracture with or without the end-piece; but the farther it is removed from the seat of injury, the sound is the more distinct when the end-piece is removed. 2.

When the bone is near the surface, the sound is always most distinct; the slightest motion elicits it; and it is most sensible just over the fracture. Hence we may thus discover the precise seat of the injury. 3. The crepitation diminishes as the instrument recedes from the fracture, yet may be felt at a very great distance. 4. When the bone rides, the sound is less obvious; but it becomes more distinct after extension and counter-extension. 5. The crepitation of compact bones gives a sharp, strong crackling, even sometimes so loud as to grate upon the ear. 6. That of spongy bones resembles the action of a file on such a substance as pumice, interrupted, however, by occasional sharp crackling. 7. Oblique fractures crepitate more distinctly than those that are transverse. 8. If liquids are effused round the broken ends, a sound is superadded, like that of the foot when thrust into an old shoe soaked with water. 9. When the fracture is complicated with splinters, the crepitation is united with a crackling as of several cornered bodies rubbing each other. 10. When it is complicated with laceration of the soft parts, the crepitation is united with a sound like that of a person breathing forcibly with the mouth wide open. 11. Dislocations give a very obscure dead sound, almost confined to the seat of the displacement. 12. The sliding of the tendons in their sheaths causes a full, dead sort of shock, quite different from crepitation.

The ingenious author maintains that two advantages attend this application of the stethoscope. In the first place, some fractures will be at once detected, which can be recognised in no other way; and, secondly, fractures of every sort may be easily and accurately recognised, with far less pain to the patient. Although we have not yet made trial of the stethoscope for this purpose, yet from what we know of its utility in pectoral diseases, and of the common principles of acoustics, no doubt can be entertained of the correctness of M. Lisfranc's experiments. It is only necessary to warn the reader, that, in employing the instrument of Laennec, either for this or any other purpose, he must not expect to succeed at the first attempt. To use it successfully requires considerable previous study, and perhaps also some tuition,—a fact, which never seems to occur to the numerous practitioners in our country, who neglect and despise it, without having taken any pains to appreciate its merits. M. Lisfranc has also applied it to the detection of urinary calculi, of biliary calculi, and of hydarthrosis. The first of these applications is useless; the fingers which hold the sound being just as fit for the purpose as the stethoscope held over the pubis. Out of many trials, the author detected the presence of biliary calculi in one instance only. Its use in hydarthrosis is obvious.

On the Use of Sulphate of Kina in Intermittent Fever. (*Giornale Arcadico di Scienze, &c. Novembre* 1822. xlvii. 129.)—The following statement by de Rossi of Anani and Tonelli, a physician at Paliano, is derived from the most precise and extensive experiments yet published on this subject. Both of them have made up a set of admirable tables, from which we

have deduced the subsequent particulars. De Rossi used the sulphate of kina in 64 cases, namely in 8 simple tertians, 29 double tertians, 2 simple quartans, 17 subcontinued, and 8 pernicious intermittents. *All of these were cured; 50 had no subsequent paroxysms, 7 had only one very slight fit, 5 two similar fits, 1 several fits, and 1 passed into a continued remittent fever.* One person affected with a quartan for 12 months, recovered after a single slight return of the paroxysm. The quantity of the salt used varied between 12 and 72 grains; and in 45 cases did not exceed 24. The remedy was given in pills, and always in the apyretic intervals, in doses of 4 grains every hour, or every alternate hour; and, in general to confirm the cure, 4 grains were given daily for 10 days after the last paroxysm. The principal advantages to be derived from it, in preference to the bark itself, are the following:—It may easily be given to children, and to those who have a disgust at bark, or are affected by it idiosyncratically; and it has a rapidity of effect, especially in pernicious and sub-continued intermittents, far surpassing that of the bark. He farther proves, that large doses produce no bad consequences; in other words, that it can never act poisonously; that it may be given safely to persons of all ages and temperaments, to puerperal, pregnant, and menstruating females; and that, when it fails. the failure is owing either to the existence of some other morbid cause, or to the sulphuric acid being present in excess, or to the salt being decomposed by pharmaceutic substances intermingled, or by other matters which it encounters in the alimentary canal. The observations of Tonelli are equally pointed. He used it in 65 cases, namely in 4 quotidians, 22 simple tertians, 31 double tertians, 3 simple quartans, 2 double quartans, 2 subcontinued, and 1 pernicious intermittent. All of them recovered, except the last, who would not take the remedy till he was insensible and near the point of death. Forty-two recovered without any return of the fit; of the 65 cases only 43 required a repetition of the first dose, which varied from 12 to 18 grains. These results, especially those of De Rossi, who used the salt in greater quantity than Tonelli, and in a greater number of bad intractable cases, place the superiority of the sulphate of kina beyond all doubt, both as to convenience and efficacy.

METEOROLOGICAL OBSERVATIONS

FOR DECEMBER 1823.

Made at the New-York Hospital, by RICHARD PENNELL, M. D.

	Barometer.						Thermometer.			Winds.			Rain Gauge	Hygrometer.	Weather.
	7 A M		2 P M		9 P M		7 AM	2 PM	9 PM	7 AM	2 PM	9 PM			
1	30	32	30	32	30	36	32	50	34	nw	nw	w		650	variable
2	30	48	30	48	30	50	34	52	36	w	w	w		648	do
3	30	50	30	50	30	28	32	54	42	w	w	sw		658	clear
4	30	13	29	90	29	86	40	45	44	sw	sw	sw	1.61	675	cloudy
5	29	80	29	98	30	18	36	41	29	w	w	nw		658	clear
6	30	37	30	34	30	30	24	40	35	nw	nw	sw		673	do
7	30	28	30	18	30	28	36	46	38	sw	sw	sw	—.02	660	cloudy
8	30	47	30	52	30	64	32	38	22	nw	nw	ne		652	do
9	30	78	30	65	30	51	18	34	26	ne	ne	ne		654	do
10	30	20	30	28	30	42	28	36	33	n	nw	nw		654	do
11	30	52	30	46	30	46	26	34	23	nw	nw	nw		654	do
12	30	40	30	40	30	35	30	33	33	cal.	nw	nw		661	do
13	30	30	30	30	30	27	30	34	27	w	w	nw		666	clear
14	30	27	30	14	30	04	26	36	33	nw	ne	ne		680	cloudy
15	29	92	29	80	29	74	32	34	33	ne	ne	n		680	do
16	29	74	29	70	29	96	30	29	26	n	n	n		678	do
17	30	15	30	18	30	22	29	34	26	n	nw	nw		676	do
18	30	27	30	27	30	04	22	45	40	nw	s	s	—.50	689	variable
19	29	74	29	74	29	74	43	48	39	se	nw	nw	—.15	710	cloudy
20	29	74	29	98	30	16	36	41	33	nw	nw	w	—.04	689	variable
21	30	35	30	39	30	52	30	34	26	w	nw	nw		685	clear
22	30	60	30	54	30	30	24	44	40	nw	sw	s	—.58	694	cloudy
23	30	16	29	84	29	78	42	46	44	s	s	s	2.00	714	do
24	29	72	29	94	30	14	42	44	30	w	nw	nw		690	do
25	30	50	30	42	30	26	22	32	27	nw	nw	sw		678	clear
26	30	66	30	66	30	71	26	36	28	nw	w	w		671	do
27	30	61	30	47	30	34	34	46	30	w	sw	w	— 01	681	do
28	30	26	30	26	30	26	40	50	37	sw	w	w		680	do
29	30	28	30	28	30	30	28	44	36	w	w	w		684	do
30	30	30	30	28	30	22	32	46	40	w	sw	sw		691	do
31	30	10	30	18	30	24	42	58	46	sw	sw	sw		695	do

The quantity of rain which fell this month is 4 inches and 91—100ths.

This month was unusually mild, and assumed very little the appearance of winter; and especially the last seven days. The sun was obscured 4th, 9th, 10th, 12th, 15th, 23d, and 24th Fog on mornings of 4th, 18th, 27th, 28th, and 29th. A little snow fell on the 9th On the 10th there fell 2 inches on the level. A few flakes fell on the afternoon of the 12th and 15th. On the 16th 8 inches fell, which afforded good sleighing until the night of the 18th, when it was melted by a heavy fall of rain, accompanied by a violent gale of wind from the south-east, which continued until noon of the 19th. A little hail fell at 8 A. M. on the 20th with a bleak north-west wind.

METEOROLOGICAL OBSERVATIONS

FOR JANUARY 1824.

Made at the New-York Hospital, by RICHARD PENNELL, M. D.

	Barometer.						Thermometer.			Winds.			Rain Gauge.	Hygrometer.	Weather.
	7 A M		2 P M		9 P M		7 AM	2 PM	9 PM	7 AM	2 P M	9 PM			
1	30	30	30	26	30	30	40	40	33	n	ne	ne	—.22	700	cloudy
2	30	30	30	24	30	12	32	42	36	ne	ne	sw		701	do
3	29	98	29	92	29	94	36	48	38	sw	sw	sw		698	do
4	29	98	29	98	29	90	34	50	43	sw	sw	sw		698	clear
5	29	83	29	76	29	63	42	52	45	sw	sw	sw	—.01	725	cloudy
6	29	50	29	50	29	79	58	56	34	sw	sw	sw	—.22	710	do
7	30	47	30	47	30	47	26	44	31	nw	nw	nw		700	clear
8	30	47	30	50	30	54	32	45	31	nw	nw	n		692	do
9	30	60	30	60	30	48	30	48	43	n	n	s		710	do
10	30	25	30	25	30	25	50	56	53	s	s	s	—.75	744	cloudy
11	30	25	30	16	30	26	40	41	40	ne	ne	nw	—.18	735	do
12	30	40	30	40	30	32	38	4	35	nw	nw	nw		737	clear
13	30	27	30	15	29	70	36	44	43	n	n	sw	—.03	738	cloudy
14	29	56	29	64	29	87	44	38	24	sw	nw	nw		710	do
15	30	00	30	00	29	89	24	32	28	nw	nw	nw		700	do
16	29	80	29	72	29	72	34	36	26	sw	nw	nw		685	do
17	29	75	29	84	29	80	32	38	28	nw	nw	w		680	do
18	29	72	29	72	29	78	32	40	26	cal.	n	n		682	do
19	29	80	29	80	29	84	22	32	19	n	n	nw		672	do
20	29	88	29	84	29	80	20	26	23	nw	nw	nw		670	clear
21	29	75	29	79	29	92	32	34	25	sw	nw	nw		662	cloudy
22	30	12	30	12	30	12	12	32	25	nw	nw	w		658	clear
23	30	12	30	18	30	22	26	38	29	ne	ne	ne		648	do
24	30	30	30	24	30	18	32	42	32	ne	ne	ne		675	cloudy
25	30	00	29	74	29	45	30	33	36	ne	ne	ne	1.18	686	do
26	29	35	29	34	29	53	35	42	32	nw	nw	nw		682	do
27	29	85	29	88	29	88	32	43	34	nw	w	sw		671	clear
28	29	91	29	94	29	94	34	42	38	sw	sw	sw		674	cloudy
29	30	08	30	10	30	00	34	46	36	sw	sw	sw		661	do
30	29	95	29	95	29	95	32	44	32	sw	nw	nw		658	do
31	29	96	29	96	29	96	32	40	26	nw	nw	nw		654	do

The quantity of rain which fell this month is 2 inches and 59—100ths.

The month of January was moderate and agreeable, the mercury in the thermometer being seldom below the freezing point. Fog on the mornings of the 1st, 3d, 5th, and 18th. A small quantity of snow fell in the night of the 2nd, 16th, and 29th, and on the afternoon of the 21st and 30th. Hoar frost on the mornings of the 4th and 9th. Sleet fell at intervals on the 26th. The sun was obscured on the 1st, 2nd, 6th, 11th, 13th, and 25th. Strong gales of wind, which did considerable damage to the shipping, on the 14th and 25th.

METEOROLOGICAL OBSERVATIONS

FOR FEBRUARY 1824.

Made at the New-York Hospital, by Richard Pennell, M. D.

	Barometer.						Thermometer.			Winds.			Rain Gauge.	Hygrometer.	Weather.
	7 A M		2 P M		9 P M		7 AM	2 PM	9 PM	7 A M	2 P M	9 P M			
1	29	96	30	14	30	23	24	22	14	nw	nw	nw		654	cloudy
2	30	35	30	24	30	30	12	24	18	w	sw	sw		644	do
3	30	30	30	18	29	86	18	34	29	sw	sw	sw		642	clear
4	29	79	29	86	30	14	34	46	19	sw	w	nw		638	cloudy
5	30	33	30	33	30	35	8	18	12	nw	nw	nw		632	clear
6	30	33	30	28	30	13	20	34	32	sw	sw	sw		638	do
7	30	10	30	00	29	96	32	52	34	sw	sw	sw		656	cloudy
8	29	90	29	96	30	18	32	55	38	e	sw	sw		654	do
9	30	37	30	37	30	34	34	48	35	sw	sw	sw		656	do
10	30	34	30	30	30	14	34	58	49	s	s	se	—.38	680	do
11	29	99	29	73	29	80	44	64	48	se	sw	nw	—.63	701	do
12	29	93	29	98	30	38	34	34	22	nw	nw	nw		675	do
13	30	76	30	74	30	70	26	34	30	calm	se	se		674	clear
14	30	67	30	60	30	50	32	36	34	calm	se	se	—.03	685	cloudy
15	30	19	30	00	29	92	34	36	38	ne	ne	ne	2.10	698	do
16	29	73	29	61	29	50	36	38	30	calm	ne	ne		692	variable
17	29	77	29	98	30	10	34	46	40	nw	nw	se		692	cloudy
18	30	18	29	98	29	94	38	54	37	se	s	s		712	do
19	30	30	30	36	30	24	32	36	30	nw	nw	nw		676	clear
20	30	17	30	15	30	05	32	52	39	sw	sw	sw	—.67	670	variable
21	30	05	29	98	29	90	40	55	47	sw	sw	sw		684	do
22	29	50	29	30	29	34	38	38	28	ne	ne	ne		676	cloudy
23	29	70	29	64	29	72	32	34	22	n	ne	ne		672	do
24	29	83	29	96	30	16	21	36	19	n	n	n		662	do
25	30	34	30	18	29	98	22	36	30	nw	w	w		875	do
26	29	95	29	76	29	52	40	54	50	s	sw	sw	—.42	706	do
27	29	38	29	38	29	54	38	42	31	s	sw	nw		694	do
28	29	94	29	98	30	06	26	32	26	nw	nw	nw		672	do
29	30	16	30	24	30	30	28	34	24	w	nw	nw		660	clear

The quantity of rain which fell in this month is 4 inches and 23—100ths.

February set in with very pleasant weather, and was characterized throughout for its unusual moderation; the mean of the thermometrical range is considerably greater than we experienced in the same month of the preceding two years. Fog on the morning of the 9th, 11th, 14th, 15th, and 16th Snow fell in the night of the 3d, two inches deep; in the night of 22d, two inches; and in the night of the 23d, four inches; and a little fell on the 14th, 16th, and 25th. Sleet fell at intervals on the 14th and 27th: the sun was obscured on the 10th, 14th, 15th, and 28th. Violent tempest from the N.E. on the 15th, and strong gales on the 11th, 12th, 22d, and 26th.

TO READERS AND CORRESPONDENTS.

We have received a long communication from Dr. Miner of Middletown, containing a series of strictures upon our review of a work lately published by himself and Dr. Tully, entitled "Essays on Fevers and other Medical subjects." As the article is well written, and at the same time couched in language extremely decorous and respectful, we should be much pleased to comply with the request of the author to give it a place in this Journal, did we not conceive that by so doing we should establish a precedent, which might subject us to the unpleasant necessity of admitting criticisms upon every review that might appear in this work, a course of proceeding which we suspect would not be much relished by our subscribers. There is one subject, however, on which we think Dr. Miner is fairly entitled to a hearing, and this is his claim to *originality* in his peculiar method of using calomel in fevers, which it will be recollected that we took the liberty of calling in question. The following extract from Dr. Miner's communication, which we cheerfully publish, will enable our readers to judge for themselves. We hope the course we have adopted may prove satisfactory to our friends Drs. Miner and Tully, for whom we entertain the sincerest respect, and whom we should be proud to number among the regular contributors to this Journal.

"We well know" says Dr. M. "that almost every conceivable change has been occasionally or accidentally rung upon mercury, so that it is extremely difficult to hit upon any use of it, that has not already been employed. This, however, does not prevent its being systematically administered with *new views*, and upon an entirely *new plan* of management. We lay little stress upon the term *original*, yet we do contend that our *mode* of giving pure calomel, in very small doses, every two or three hours, so that if possible, it may not operate by the bowels under twelve hours from the administration of the first dose, accompanying it with a moderately diaphoretic course of warm vegetable infusions, assisted with pediluvium, fomentations, sinapisms, epispastics, &c. according to circumstances, at the same time being very cautious to prevent excessive catharsis, is much the most successful method for breaking up *regular* nervous fever of any that we have ever known tried for the same purpose; and that this *precise* method of practice, at the access of fever is *peculiarly our own.* Previous to its being adopted by the author of the first essay, we never saw or heard of its being employed in this way, with intent to produce a resolution of fever, by any physician; nor have we ever found it recommended by any other author. Our process and aim in the incipient stage of fever are entirely different from the usual course of *free* purging with *large* doses of calomel and jalap, to operate as *speedily* as possible, or of giving night and morning *full* doses of calomel, or of attempting, in any way, to produce early ptyalism. Very *active* purging, of all things, except profuse bleeding, we would wish to avoid; nor do we by any means wish to induce complete salivation. Indeed, venesec-

tion, vomiting, purging, sweating, or any other evacuation, when it amounts to depletion, (see essay on diathesis,) we consider as a doubtful remedy in regular nervous fever, and to be more likely to increase and coincide with the existing morbid action, than to counteract and remove it.

"To the other processes which we recommend, in case that ours of slow and moderate purging has failed of breaking up the fever, that is, the use of calomel and opium, to moderate and change the diseased action of the remaining part of the preparatory stage, as well as to the method of support in the stage of exhaustion, we have never laid the slightest claim to originality. The former was pretty well understood by many physicians of New-England, about half a century before it was recommended by Dr. Hamilton of Lynn Regis; and the latter, in some form or other, has been the practice of nine-tenths of the medical world, in malignant fevers, and in the stage of exhaustion of other diseases, ever since the days of Hippocrates."

Our next number will contain communications from Professors Macneven and Mott, Drs. Coventry, Greenhow, &c. &c.

ERRATUM IN NO. VIII.

P. 435, line 18 from top, for *exposure* read *pressure*.

No. X. will appear on the last day of June.